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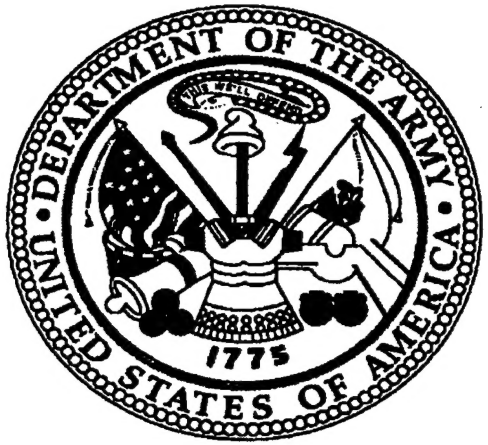
Procurement Programs



Committee Staff Procurement Backup Book
FY 1998 / FY 1999 Budget Estimate

MISSILE PROCUREMENT, ARMY

APPROPRIATION

February 1997

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ARMY Budget Documents

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Phone Conf Per: Larry Stopher
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697-6241
Telephone Number

MISSILE PROCUREMENT, ARMY

APPROPRIATION LANGUAGE

For construction, procurement, production, modification, and modernization of missiles, equipment, including ordnance, ground handling equipment, spare parts, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefor, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; $1,178,151,000 in fiscal year 1998 to remain available for obligation until September 30, 2000.

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1997 BUDGET REQUEST
WITH THE FY 1997 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/99 BUDGET REQUEST
(In Millions of Dollars)

Appropriation Missile Procurement, Army	FY 1997 Requirements per FY1997 Budget	FY 1997 Requirements per FY1998/1999 Budget	Increase or (Decrease)
Activity 2 - Other Missiles	704	944	240
Activity 3 - Modification of Missiles	38	70	32
Activity 4 - Spares and Repair Parts	12	12	0
Activity 5 - Support Equipment and Facilities	12	12	0
Reimbursable Program	30	30	0
	796	1,068	272

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase resulted from congressional adjustments to Javelin (+34), Avenger (+59), MLRS Rocket (+17), MLRS Launcher (+67), ATACMS (+69), distribution of reductions for P.L.104-208, SEC 8037 (-3), P.L. 104-208, SEC 8138 (-1).

Activity 3 - Modification of Missiles - The net increase resulted from congressional adjustment to Patriot Mod (+12), Stinger Mod (+20), distribution of reductions for P.L.104-208, Sections 8138 and 8037 (-0.075).

Activity 4 - Spares and Repair Parts - A proportionate reduction was made for Sections 8138 and 8037 of P.L. 104-208 (-0.011).

Activity 5 - Support Equipment and Facilities - A proportionate reduction was made for Sections 8138 and 8037 of P.L.104-208 (-0.011).

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1998/99 BUDGET REQUEST
WITH THE FY 1998 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/1999 BUDGET REQUEST
(In Millions of Dollars)

Appropriation Missile Procurement, Army	FY 1997 Requirements FY1998/99 Budget	FY 1998 Requirements FY1998/1999 Budget	Increase or (Decrease)
Activity 2 - Other Missiles	944	1,062	118
Activity 3 - Modification of Missiles	70	98	28
Activity 4 - Spares and Repair Parts	12	11	(1)
Activity 5 - Support Equipment and Facilities	12	7	(5)
Reimbursable Program	30	180	150
	1,068	1,358	290

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase results from: BMDO funding transfer for PAC 3 (+349) and increased ATACMS Block IA buy (+23); completion of quantity buys for Avenger (-78), Hellfire II (-93), and MLRS Rocket (-39) along with funding decrease to Javelin (-18), TOW (-12) and other program adjustments (-14).

Activity 3 - Modification of Missiles - The net increase results from: start of ITAS buy (+63), funding decrease in Stinger (-24), Patriot (-3), MLRS (-4) Mods, and no funding for Dragon Mod (-3).

Activity 4 - Spares and Repair Parts - The net decrease results from minor funding adjustments to Initial Spares and Repair Parts (-1).

Activity 5 - Support Equipment and Facilities - The net decrease results from decrease to Air Defense Targets (-5).

Reimbursable Program - The net increase results from projected increase in Federal (+78) and FMS (+54) sales.

COMPARISON OF FY 1998 PROGRAM REQUIREMENTS
AS REFLECTED IN THE FY 1998/99 BUDGET REQUEST
WITH THE FY 1999 PROGRAM REQUIREMENTS
AS SHOWN IN THE FY 1998/1999 BUDGET REQUEST
(In Millions of Dollars)

Appropriation Missile Procurement, Army	FY 1998 Requirements FY1998/99 Budget	FY 1999 Requirements FY1998/1999 Budget	Increase or (Decrease)
Activity 2 - Other Missiles	1,062	1,417	355
Activity 3 - Modification of Missiles	98	96	(2)
Activity 4 - Spares and Repair Parts	11	21	10
Activity 5 - Support Equipment and Facilities	7	7	0
Reimbursable Program	180	164	(16)
	1,358	1,705	347

EXPLANATION BY ACTIVITY

Activity 2 - Other Missiles - The net increase results from: increased quantity buys for Patriot (+21), Longbow Hellfire (+64), Javelin (+184), and BAT (+15); start quantity buy for ER-MLRS (+16), ATACMS Block II (+61), and other adjustments (-6).

Activity 3 - Modification of Missiles - The net decrease results from adjustments to modification programs (-2).

Activity 4 - Spares and Repair Parts - The net increase results from an increase in Spares and Repair Parts for Javelin (+4), and MLRS Launcher (+6).

Reimbursable Program - The net decrease results from: increase in sale of Javelin to USMC (+42), no anticipated sale of MLRS Rocket/Launcher (-54) and minor adjustments associated with the sale of several other items (-4).

Index for MISSILE PROCUREMENT, ARMY

Blin	Nomenclature	SSN	Filename	Page Number
	P-1 EXHIBIT			P1-1
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2	AVENGER SYSTEM SUMMARY	C14900	28600147.98P	7
3	HELLFIRE SYS SUMMARY	C70000	21338139.98P	17
4	JAVELIN (AAWS-M) SYSTEM SUMMARY	CC0007	20648139.98P	31
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11	ATACMS/BAT	CA6101	26800139.98P	71
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14	STINGER MODS	C20000	22684139.98P	112
15	ITAS/TOW MODS	C61700	23972139.98P	124
17	MLRS MODS	C67500	26552139.98P	136
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19	AIR DEFENSE TARGETS	C93000	21242115.98P	167
20	ITEMS LESS THAN $2.0M (MISSILES)	CL2000	23902147.98P	172
21	MISSILE DEMILITARIZATION	HL2000	24094147.98P	174
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DEPARTMENT OF THE ARMY
FY 98/99 PROCUREMENT PROGRAM

EXHIBIT P-1
February 1997

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) FY 96 QTY	FY 96 COST	FY 97 QTY	FY 97 COST	FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****SURFACE-TO-AIR MISSILE SYSTEM****										
1	PATRIOT SYSTEM SUMMARY (MYP) (C49100)	A	6,713,634		4,924			52	349,109	68	369,885
2	AVENGER SYSTEM SUMMARY (C14900)				30,532		71,913				
	SUB-ACTIVITY TOTAL				**35,456**		**71,913**		**349,109**		**369,885**
	****AIR-TO-SURFACE MISSILE SYSTEM****										
3	HELLFIRE SYS SUMMARY (C70000)	A	190,912	1,102	235,954	2,805	357,254	1,465	279,687	2,000	345,433
	SUB-ACTIVITY TOTAL				**235,954**		**357,254**		**279,687**		**345,433**
	****ANTI-TANK/ASSAULT MISSILE SYSTEM****										
4	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)		132,511	1,010	200,858	1,020	161,281	1,080	143,112	3,316	326,623
5	JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007) ADVANCE PROCUREMENT (CY)						34,000				
6	TOW 2 SYSTEM SUMMARY (C59300)	A			9,686		13,571		1,326		
7	MLRS ROCKET (C65400)			1,326	44,607	1,674	41,404		2,863	534	18,955
8	MLRS LAUNCHER SYSTEMS (C66400)		3,539,620		81,093		103,703	29	102,649	32	92,457
9	ARMY TACTICAL MSL SYS (ATACMS) -SYS SUM (C98510)	A	748,326	120	121,303	97	91,815	153	114,494	160	120,400
	LESS: ADVANCE PROCUREMENT (PY)								-16,680		-17,440
					121,303		91,815		97,814		102,960

Appropriation: **MISSILES**

Activity: 2. **OTHER MISSILES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) FY 96		FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
10	ARMY TACTICAL MSL SYS (ATACMS) -SYS SUM (C98510)										
	ADVANCE PROCUREMENT (CY)						69,000				
11	ATACMS/BAT (CA6101)	A								50	60,781
12	BAT (CA6100)	A	279,370					305	85,208	547	100,137
	SUB-ACTIVITY TOTAL				**457,547**		**514,774**		**432,972**		**701,913**
	ACTIVITY TOTAL				**728,957**		**943,941**		**1,061,768**		**1,417,231**

Appropriation: **MISSILES**

Activity: 3. **MODIFICATIONS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) FY 96 QTY	FY 96 COST	FY 97 QTY	FY 97 COST	FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****MODIFICATIONS****										
13	PATRIOT MODS (C50700)				6,767		23,442		20,825		15,575
14	STINGER MODS (C20000)				11,304		36,860		12,411		14,413
15	ITAS/TOW MODS (C61700)				40,728		16		62,755		63,774
16	DRAGON MODS (C57300)				667		3,178				
17	MLRS MODS (C67500)				27,475		6,410		2,188		2,239
	SUB-ACTIVITY TOTAL				**86,941**		**69,906**		**98,179**		**96,001**
	ACTIVITY TOTAL				**86,941**		**69,906**		**98,179**		**96,001**

Appropriation: **MISSILES**

Activity: 4. **SPARES AND REPAIR PARTS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) FY 96		FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****SPARES AND REPAIR PARTS****										
18	SPARES AND REPAIR PARTS (CA0250)				11,500		12,078		11,381		21,385
	SUB-ACTIVITY TOTAL				**11,500**		**12,078**		**11,381**		**21,385**
	ACTIVITY TOTAL				**11,500**		**12,078**		**11,381**		**21,385**

Appropriation: **MISSILES**

Activity: 5. SUPPORT EQUIPMENT AND FACILITIES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) FY 96		FY 97		FY 98		FY 99	
				QTY	COST	QTY	COST	QTY	COST	QTY	COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****SUPPORT EQUIPMENT AND FACILITIES****										
19	AIR DEFENSE TARGETS (C93000)				6,595		6,195		998		996
20	ITEMS LESS THAN $2.0M (MISSILES) (CL2000)				971		991		954		941
21	MISSILE DEMILITARIZATION (HL2000)				1,643		1,532		1,507		1,496
22	PRODUCTION BASE SUPPORT (CA0100)				2,848		3,466		3,364		3,325
	SUB-ACTIVITY TOTAL				**12,057**		**12,184**		**6,823**		**6,758**
	ACTIVITY TOTAL				**12,057**		**12,184**		**6,823**		**6,758**
	APPROPRIATION TOTAL				**839,455**		**1,038,109**		**1,178,151**		**1,541,375**

PROCUREMENT PROGRAM-INSTALLATION SUMMARY

(TOA, Dollars in Millions)

System/Modification	Prior Yrs	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total
PATRIOT MODS	10.4	1.2	1.6	1.4	1.8	2.2	1.8	1.4	21.8
TOW MODS	16.9	0.0	0.1	2.1	0.2	0.3	0.3	1.4	21.3
MLRS MODS	204.2	6.4	2.2	2.2	2.3	2.6	2.6	2.5	225
TOTAL FOR MISSILE MOD	231.5	7.6	3.9	5.7	4.3	5.1	4.7	5.3	268.1

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
MISSILE PROCUREMENT /Other Missiles	PATRIOT SYSTEM SUMMARY (MYP) (C49100)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	6475			52	68	180	212	220	240	228	7675
COST (in millions)	9629.1	4.9	0.0	349.1	369.9	459.2	445.4	433.1	396.8		12087.5
Initial Spares (in millions)	344.3										344.3
Total (in millions)	9973.4	4.9		349.1	369.9	459.2	445.4	433.1	396.8		12431.8
Unit Cost (in millions)	1.5			6.7	5.4	2.6	2.1	2.0	1.7		1.6

DESCRIPTION: PATRIOT is an advanced Surface-to-Air guided missile system with a high single shot kill probability capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missiles likely to be encountered by US Forces during the 90's and beyond. The system utilizes a multifunction Phased Array Radar, a digital computer controlling system functions, a guidance system combining command and homing (track-via-missile) features, and provides the operator the ability to control operations. PATRIOT totally replaced Nike Hercules and partially replaced HAWK. It has the advantage of reducing manpower and logistics costs associated with the replaced systems while providing improved high and medium altitude air defense. Deployment is to the field Army and the system is integrated with the U.S. Air Force in the overall air defense of the theater of operations

The PATRIOT Advanced Capability (PAC)-3 program is a result of a series of integrated, phased system improvements in combination with the PAC-3 missile which utilizes hit-to-kill technology. Modification to the system, which includes radar enhancements, communication upgrades and increased command, control, and computer capability, will increase PATRIOT's effectivity, survivability, flexibility of defense design, footprint and detection of smaller low radar cross section targets.

JUSTIFICATION: FY98-FY03 includes costs for PAC-3 missile and modifications to support equipment.

Cooperative Agreements:

U.S. Owned/FRG Manned - The Memorandum of Understanding for enhancing air defense for Central Europe dated 6 Dec 84, providing U.S. support to US owned/FRG Manned PATRIOT Fire Units.

NATO Maintenance and Supply Agency (NAMSA) - DOD directed requirement to support the European and NATO deployed units (International agreement Germany, the Netherlands and the U.S. for common logistics support of PATRIOT).

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON PATRIOT			C. MANUFACTURER NAME Raytheon, Andover, MA			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring								**114604**	**52**	**2204**	**132385**	**68**	**1947**
SubTotal Missile Hardware								**114604**			**132385**		
Non-Recurring Costs													
Total Flyaway								**114604**			**132385**		
Ground Support Equipment													
Radar Phase III								38000			37000		
CDI Phase III								14800			13800		
RLCEU								21900			22700		
Command and Launch System								21200			39800		
Modification Spares								39300			32200		
Total Ground Support Equipment								135200			145500		
SubTotal C&L Hardware								**249804**			**277885**		
Support Cost													
Contractor Engineering								29300			27200		
Government Engineering								21905			20500		
SEPM		2200						20655			19300		
Integrated Logistics Support								11950			11200		
NAMA								5317			4300		
DMPE								5000			4600		
Fielding		2724						5178			4900		
SubTotal Support Cost		**4924**						**99305**			**92000**		
Gross P-1 End Cost		**4924**						**349109**			**369885**		
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		**4924**						**349109**			**369885**		
PLUS P-1 CY Adv. Proc.													
Other Non P-1 Costs													
Initial Spares													
MODS		6767			23442			20825			15575		
MOD Initial Spares		3385			6975			2732			3622		
TOTAL		**15076**			**30417**			**372666**			**389082**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: PATRIOT

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
PRODUCTION CONTRACT PATRIOT MSL MULTIYEAR		(2)								
FY87	Raytheon Co Andover, MA	SS/FPM-5(1)*	MICOM	Mar-87	Jan-89	700	502000			
FY88	Raytheon Co Andover, MA	SS/FPM-5(2)*	MICOM	Nov-87	Jan-90	715	474000			
FY89	Raytheon Co Andover, MA	SS/FPM-5(3)*	MICOM	Nov-88	Sep-90	815	475000	YES	NO	
FY90	Raytheon Co Andover, MA	SS/FPM-5(4)*	MICOM	Nov-89	Aug-91	815	497000	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	Nov-90	Jul-92	1100	522000	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	May-92	Oct-94	83	717000	YES	NO	
FY92	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	May-92	Oct-94	97	714000	YES	NO	
PATRIOT GSE MULTIYEAR										
FY87	Raytheon Co Andover, MA	SS/FPM-3(1)*	MICOM	Mar-87	Jan-89	12	N/A			
FY88	Raytheon Co Andover, MA	SS/FPM-3(2)*	MICOM	Nov-87	Jan-90	12	N/A			
FY89	Raytheon Co Andover, MA	SS/FPM-3(3)*	MICOM	Nov-88	Jan-91	10	N/A	YES	NO	
FY90	Raytheon Co Andover, MA	SS/FPM-4(4)*	MICOM	Mar-90	Feb-92	10	N/A	YES	NO	
FY91	Raytheon Co Andover, MA	SS/FPM-5(5)*	MICOM	Nov-90	Jan-93	10	N/A	YES	NO	
PAC-3 MISSILE										
FY 98	LMVS Dallas, TX	SS/CPIF	MICOM	Nov-97	Apr-99	52	2204000	N/A		
FY 99	LMVS Dallas, TX	SS/CPIF	MICOM	Nov-98	Apr-00	68	1947000	N/A		

REMARKS:

(1) Raytheon Company contract includes Martin Marietta (Orlando, FL) as subcontractor for missiles.

(2) Sole Source Procurement is necessary because only the development contractors possess the technical expertise necessary to perform the effort without duplication of time, funds and effort already expended.

(3) Fire Unit cost contains one Radar, one Engagement Control Station, and eight Launchers. Missile unit cost does not contain warhead cost.

* Contract contains economic price adjustment clause. No cost has been recouped to date.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: PATRIOT

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 99 / Calendar Year 99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
CA MAR -87	1	93/P	A	2850	2850																										
	1		FMS	445	445																										
CA NOV-87	1	93/P	A	715	715																										
	1		FMS	169	169																										
CA NOV-88	1	93/P	A	815	815																										
	1		FMS	184	184																										
CA NOV-89	1	93/P	A	815	815																										
	1		FMS	89	89																										
CA NOV-90	1	93/P	A	898	898																										
	1		FMS	37	37																										
CA MAY-92	1	93/P	A	83	83																										
CA MAY-92	1	93/P	A	97	97																										
	1		FMS	840	840																										
PAC-3 Missile	2	98	A	52	0	52																			4	4	4	4	4	4	28
PAC-3 Missile	2	99	A	68	0	68																									68
TOTAL				**8157**	**8037**	**120**																			**4**	**4**	**4**	**4**	**4**	**4**	**96**

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	RAYTHEON COMPANY/ ANDOVER, MA	40	64	80	1
2	Locheed Martin Vought Systems	20	20	40	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	4	3	25	28
	REORDER	7	3	24	27
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: PATRIOT

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
CA MAR -87	1	93/P	A	2850	2850																									
	1		FMS	445	445																									
CA NOV-87	1	93/P	A	715	715																									
	1		FMS	169	169																									
CA NOV-88	1	93/P	A	815	815																									
	1		FMS	184	184																									
CA NOV-89	1	93/P	A	815	815																									
	1		FMS	89	89																									
CA NOV-90	1	93/P	A	898	898																									
	1		FMS	37	37																									
CA MAY-92	1	93/P	A	83	83																									
CA MAY-92	1	93/P	A	97	97																									
	1		FMS	840	840																									
PAC-3 Missile	2	98	A	52	24	28	4	4	5	5	5	5																		
PAC-3 Missile	2	99	A	68	0	68							5	5	5	5	6	6	6	6	6	6	6	6						
TOTAL				**8157**	**8061**	**96**	**4**	**4**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**						

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	RAYTHEON COMPANY/ ANDOVER, MA	40	64	80	1
2	Locheed Martin Vought Systems	20	20	40	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	INITIAL	4	3	25	28	
	REORDER	7	3	24	27	
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

FY 98 / FY 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: PATRIOT SYSTEM SUMMARY (MYP) (C49100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY96 OCT	FY96 NOV	FY96 DEC	FY96 JAN	FY96 FEB	FY96 MAR	FY96 APR	FY96 MAY	FY96 JUN	FY96 JUL	FY96 AUG	FY96 SEP	FY97 OCT	FY97 NOV	FY97 DEC	FY97 JAN	FY97 FEB	FY97 MAR	FY97 APR	FY97 MAY	FY97 JUN	FY97 JUL	FY97 AUG	FY97 SEP	LATER
							Fiscal Year 96												Fiscal Year 97												
							Calendar Year 96												Calendar Year 97												
CA NOV-87	1	93/P	A	91	91																									
	1		FMS	13	13																									
CA NOV-88	1	93/P	A	10	10																									
	1		FMS	5	5																									
CA MAR-90	1	93/P	A	10	10																									
CA NOV-90	1	93/P	A	10	10																									
	1		FMS	9	9																									
	1		FMS	17	14	3	1	1	1																					
TOTAL				165	162	3	1	1	1																					

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	RAYTHEON COMPANY / ANDOVER, MA	1	1	1	1

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	4	3	30	33
	REORDER	7	3	24	27
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

THE ABOVE DELIVERIES REFLECT FIRE UNIT DELIVERIES ASSOCIATED COMMUNICATIONS EQUIPMENT. DELIVERY SCHEDULE REFLECTS ACTUAL PRODUCTION DELIVERY NOT CONTRACTED DELIVERY.

BUDGET ITEM JUSTIFICATION SHEET				DATE: February 1997				
APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles				P-1 ITEM NOMENCLATURE: AVENGER SYSTEM SUMMARY (C14900)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	30.5	71.9	0.0	0.0	0.0	0.0	0.0	0.0

Description:
The AVENGER System is a lightweight, highly mobile/transportable surface-to-air missile/gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). It is operated by a two man crew for defense against helicopters and fixed wing aircraft at low altitude, day or night, and in clear or adverse weather. The system incorporates an operator's position with controls, displays, fire control electronics, and the Standard Vehicle Mounted Launcher (SVML). The SVML includes seeker coolant bottles and related hardware and it supports and launches multiple STINGER missiles. The SVML provides output signals that can be used to display to the gunner exactly where the STINGER is pointed. The driven sight reticule capability aids the gunner in severe background clutter and Electromagnetic Counter Measure (ECM) environments. The system operates with standard unmodified Basic STINGER, STINGER-POST or STINGER-RMP missile rounds. AVENGER fills the Line-of-Sight Rear (LOS-R) role in Forward Area Air Defense Systems (FAADS).

A five year multiyear procurement (MYP) contract for AVENGER began in FY91. In 1994, Congress agreed to a provision in the FY95 budget that would grant a one year extension, at no additional cost, for extending the delivery schedule of AVENGER multiyear procurement authority so the Marine Corps and other services could take advantage of the Army's contract and favorable pricing terms. FY 97 procures the remainder of the multi-year procurement (93 fire units) for the Army National Guard.

Justification:
AVENGER constitutes the Line-Of-Sight Rear (LOS-R) component of the Forward Area Air Defense System (FAADS), and it is the first FAADS element fielded.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON AVENGER SYSTEM SUMMARY (C14900)			C. MANUFACTURER NAME Various			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
HARDWARE													
Drive Hardware					35208	93	379						
Turrent Assembly Army													
Unapplied EOQ													
EOQ Diverted to USMC													
SubTotal Missile Hardware					**35208**								
PROCUREMENT SUPPORT													
Contractor Engineering		2726			4947								
Government Engineering		2020			4716								
Project Management Administration		420			464								
TOTAL PROCUREMENT		**5166**			**45335**								
Command & Launch Hardware					15345	93	165						
Std Veh Mtd Launcher (SMVL) Army													
Other GFE- Army only													
Other (HMMWV)					4669	93	50						
SubTotal C&L Hardware					**20014**								
Support Cost													
Peculiar Support Equipment		2115											
Institutional Conduct of Fire Trainers(ICOFT)		8190			5500								
Force On Force Trainers (FOFT)		6785			1003								
DMPE													
Fielding		6261											
Interim Contractor Spt (Machinegun)		2015											
Other (FDT)					61								
SubTotal Support Cost		**25366**			**6564**								
Gross P-1 End Cost		**30532**			**71913**								
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		**30532**			**71913**								
PLUS P-1 CY Adv. Proc.													
Other Non P-1 Costs													
Initial Spares													
MODS													
MOD Spares		987											
TOTAL		**31519**			**71913**								

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: AVENGER SYSTEM SUMMARY (C14900)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
FY 97	Boeing Aerospace Huntsville, AL	SSM-7/FP	MICOM	Dec-96	Mar-97	*93	379	yes	no	

REMARKS: * No quantity shown in FYDP, however, Army plans to procure 93 fire units.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: AVENGER SYSTEM SUMMARY (C14900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
AVENGER	1	95&Pr	A	773	710	63	12	12	12	12	12	3																			
	1	95&Pr	MC	138	49	89						2	2	2	2	2	10	10	10	10	10	10	10	9							
	1	97	A	93	0	93																		1	10	10	10	10	10	10	32
TOTAL				1004	759	245	12	12	12	12	12	5	2	2	2	2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	32

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Boeing Aerospace/Huntsville, AL	3	12	40	15

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	2	10	16	26
	REORDER	1	1	16	17
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: AVENGER SYSTEM SUMMARY (C14900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY98 OCT	FY98 NOV	FY98 DEC	FY98 JAN	FY98 FEB	FY98 MAR	FY98 APR	FY98 MAY	FY98 JUN	FY98 JUL	FY98 AUG	FY98 SEP	FY99 OCT	FY99 NOV	FY99 DEC	FY99 JAN	FY99 FEB	FY99 MAR	FY99 APR	FY99 MAY	FY99 JUN	FY99 JUL	FY99 AUG	FY99 SEP	LATER
							Fiscal Year 98												Fiscal Year 99												
							Calendar Year 98												Calendar Year 99												
AVENGER	1	95&Pr	A	773	773																									
	1	95&Pr	MC	138	138																									
	1	97	A	93	61	32	10	10	10	2																				
TOTAL				1004	972	32	10	10	10	2																				

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	Boeing Aerospace/Huntsville, AL	3	12	40	15

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	2	10	16	26
	REORDER	1	1	16	17
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Simulator and Training Device Justification

Date: February 1997

Appropriation / P-1 Line Item	Weapon System (if applicable)	Equipment Nomenclature	PE
MISSILE PROCUREMENT/AVENGER TRAINING DEVICES	AVENGER	TRAINING DEVICES	C15200

Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total
Quantity (Each)									
Proc ($OOO)	27626	6503							34129
RDT&E ($OOO)									
O&S ($OOO)									

TRAINING SYSTEM DESCRIPTION:

Description:

The training devices being procured and supported for the AVENGER Air Defense Weapon System are essential to establish adequate and cost effective initial entry and sustainment training programs for the AVENGER operators and maintainers. The current initial entry training programs are seriously deficient in terms of training tasks and the cost to operate/sustain. Both operator and maintainer courses (Ft. Bliss-Operator and Redstone Arsenal-Maintainers) depend on actual AVENGER fire units to conduct training. This method of training was in place because there were no development funds for training devices in the baseline Non-Developmental Item (NDI) program. The use of actual AVENGER fire units requires a higher instructor-to-student ratio, limits the depth of training, and causes higher operating and support costs. The operators and maintainers leave the initial entry training courses with less than adequate training. The further development of critical skills and building-up proficiency in the collective environment is hampered, because there are no sustainment training devices in the field specifically designed for the AVENGER operators and maintainers.

Justification:

This training device program will put in place Institutional Conduct of Fire Trainers (ICOFT) at Ft. Bliss, Texas for operator and leadership training. The Force-On-Force Trainers (FOFT) will support the operator in a field environment for collective training.

NOTE: Training device funding in FY 95 for $8.933 million was not utilized to procure training equipment. These funds were used for production support and total package fielding costs associated with fire units procured in FY 94.

Simulator and Training Device Justification (Page 2)

Date: February 1997

Appropriation / P-1 Line Item	Weapon System (if applicable)	IOC Date	Equipment Nomenclature	PE
MISSILE PROCUREMENT/AVENGER TRAINING DEVICES	AVENGER	3Q88	TRAINING DEVICES	C15200

Training Device By Type	Site	Del. Date	Ready For Tng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999	
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
					Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO
Captive Flight Trainers (CFT)	Unit Locations	End of FY94	NOW	1	749	12651						
ICOFT	Ft. Bliss, TX	FY97	FY97	299	3	8190	2	5500				
FOFT	NTC/RANGES	FY97	Jan-00		22	6785	8	1003				
Total						27626		6503				

Simulator and Training Device Justification (Page 3)

DATE: February 1997

Training Device By Type: Captive Flight Trainers (CFT)

Weapon System (if applicable): AVENGER

Description / Justification

The Captive Flight Trainer is used to train the AVENGER operator to track and acquire targets. It is also used to train proficiency in the field and system check-out.

Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO
HARDWARE COSTS												
Device (hardware)	749	12651									749	12651
ECOs												
Nonrecurring												
GFE												
Other (Specify)												
SubTotal Hardware Costs	**749**	**12651**									**749**	**12651**
SUPPORT COSTS												
Special SE												
Integrated Logistics Support												
Other (Specify)												
SubTotal Support Costs												
Software/Courseware												
TOTAL COSTS		**12651**										**12651**

Simulator and Training Device Justification (Page 3)

DATE: February 1997

Training Device By Type: ICOFT

Weapon System (if applicable): AVENGER

Description / Justification

The ICOFT is a six student training station device needed to more efficiently train initial entry AVENGER operators at Ft. Bliss, TX.

Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO
HARDWARE COSTS												
Device (hardware)	3	8096	2	5412							5	13508
ECOs												
Nonrecurring												
GFE												
Program Mgmt		94		88								182
SubTotal Hardware Costs	**3**	**8190**	**2**	**5500**							**5**	**13690**
SUPPORT COSTS												
Special SE												
Integrated Logistics Support												
Other (Specify)												
SubTotal Support Costs												
Software/Courseware												
TOTAL COSTS		**8190**		**5500**								**13690**

Simulator and Training Device Justification (Page 3)

DATE: February 1997

Training Device By Type: FOFT

Weapon System (if applicable): AVENGER

Description / Justification

The AVENGER FOFT will be provided to the National Training Center (NTC) and instrumented ranges to enable the operators and leaders to train in a simulated combat environment.

Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO
HARDWARE COSTS												
Device (hardware)	22	5891	8	909							30	6800
ECOs		800										800
Nonrecurring												
GFE												
Program Mgmt		94		94								188
SubTotal Hardware Costs	**22**	**6785**	**8**	**1003**							**30**	**7788**
SUPPORT COSTS												
Special SE												
Integrated Logistics Support												
Other (Specify)												
SubTotal Support Costs												
Software/Courseware												
TOTAL COSTS		**6785**		**1003**								**7788**

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: HELLFIRE SYS SUMMARY (C70000)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	46590	1102	2805	1465	2000	2030	2020	2020	2060		62092
COST (in millions)	1959.5	236.0	357.3	279.7	345.4	287.3	298.6	249.9	210.7	49.0	4273.3
Initial Spares (in millions)	7.5										7.5
Total (in millions)	1967.0	236.0	357.3	279.7	345.4	287.3	298.6	249.9	210.7	49.0	4280.8
Unit Cost (in millions)	0.04	0.21	0.13	0.19	0.17	0.14	0.15	0.12	0.10		0.07

Description:

HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance; Longbow HELLFIRE uses a radio frequency guidance section and is a fire-and-forget missile. HELLFIRE is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of the HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, Laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops. Longbow HELLFIRE maximizes the ability of the AH-64D Longbow Apache Helicopter to operate in adverse weather, battlefield obscurants, and dramatically increases aircraft survivability. HELLFIRE II and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Longbow HELLFIRE began production in FY 95 with Long Lead Items and Initial Production Facilitization.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON HELLFIRE SYS SUMMARY (C70000)			C. MANUFACTURER NAME HELLFIRE Sys Lim Liab Co/Longbow Lim Liab Co			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Flyaway Costs													
All-Up-Rounds		167327	1102	152	296604	2856	104	230024	1465	157	300505	2000	150
Containers		4549	3454	1	2351	1800	1	2283	1465	2	3185	2000	2
GFE Explosives		589			1766			1180			1646		
Engineering Services		6176			8610			7316			7495		
Engineering Change Orders		3339			4153			3651			5026		
Fielding		128			937			1303			1384		
Acceptance Testing		6287			4613			5442			5564		
Total Hardware		**188395**			**319034**			**251199**			**324805**		
Engineering Support													
Project Mgt Admin		6121			8828			8582			8711		
Production Engineering Support		10184			11379			8948			8523		
Total Engineering Support		**16305**			**20207**			**17530**			**17234**		
Non-Recurring													
Disposal of Tooling/Test Equipment					1999						2277		
IPF		12309											
Cost Reduction Program		18945			4914			2459					
Rate Tooling/Test Equipment					11100			7699					
Total Non-Recurring		**31254**			**18013**			**10158**			**2277**		
Total Flyaway		**235954**			**357254**			**278887**			**344316**		
Peculiar Support Equipment													
Environmental Protection Covers								800			1117		
Total Peculiar Support Equipment								**800**			**1117**		
Gross P-1 End Item Cost		**235954**			**357254**			**279687**			**345433**		
Less PY Adv Proc													
Net P-1 Full Funding		**235954**			**357254**			**279687**			**345433**		
Plus CY Adv Procurement													
Other Non P-1 Costs													
Initial Spares													
Mods													
Total		**235954**			**357254**			**279687**			**345433**		

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	46590	750	1800								49140
COST (in millions)	1889.1	50.7	108.0	15.0	16.9	0.0	0.0	0.0	0.0		2079.7
Initial Spares (in millions)	5.7										5.7
Total (in millions)	1894.8	50.7	108.0	15.0	16.9						2085.4
Unit Cost (in millions)	0.04	0.07	0.06								0.04

Description:

HELLFIRE is an air-to-ground missile system designed to defeat individual targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE uses semi-active laser terminal guidance and is the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations Helicopters and will be used by the RAH-66 Comanche, the Army's next generation Helicopter. Production buys are scheduled to support training, testing, fielding, and deployment of these aircraft. Beginning in FY 90, the missile was reconfigured with an interim warhead to improve lethality against near term threat reactive armor. Development of HELLFIRE II was completed in 3rd Qtr, FY 93. The first full production contract was awarded on 26 May 93. HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuse with an electronic fuse, and restoration of the original length and weight. HELLFIRE II will defeat all known electro-optical countermeasures and advanced reactive armors. Using its semi-active laser homing guidance system, laser HELLFIRE is perfectly suited for precision strikes at a variety of individual hardpoint targets, while minimizing exposure of the aircraft and supporting troops.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)			C. MANUFACTURER NAME HELLFIRE Systems Limited Liability Company			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Flyaway Costs													
All-Up-Rounds		34133	750	46	83404	1800	46						
Containers		4549	3454	1	2351	1800	1						
GFE Explosives		441			1112								
Engineering Services		1929			3418			3000			3062		
Engineering Change Orders		782			1472								
Fielding		128			161			304			311		
Acceptance Testing		2311			3058			3584			3664		
Total Hardware		**44273**			**94976**			**6888**			**7037**		
Engineering Support													
Project Mgt Admin		2706			5069			2908			2956		
Production Engineering Support		3761			5924			5166			4658		
Total Engineering Support		**6467**			**10993**			**8074**			**7614**		
Non-Recurring													
Disposal of Tooling/Test Equipment					1999						2277		
IPF													
Cost Reduction Program													
Rate Tooling/Test Equipment													
Total Non-Recurring					**1999**						**2277**		
Total Flyaway		**50740**			**107968**			**14962**			**16928**		
Peculiar Support Equipment													
Environmental Protection Covers													
Total Peculiar Support Equipment													
Gross P-1 End Item Cost		**50740**			**107968**			**14962**			**16928**		
Less PY Adv Proc													
Net P-1 Full Funding		**50740**			**107968**			**14962**			**16928**		
Plus CY Adv Procurement													
Other Non P-1 Costs													
Initial Spares													
Mods													
Total		**50740**			**107968**			**14962**			**16928**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
FY 96	HELLFIRE Systems, Limited Liability Company (HSLLC) Orlando, Fl	*FFP	MICOM	Jan-96	Jul-98	750	46	Yes	No	
FY 97	HELLFIRE Systems, Limited Liability Company (HSLLC) Orlando, Fl	**FFP	MICOM	Jan-97	May-99	1800	46	Yes	No	

REMARKS: * A competition was conducted between the Martin Marietta Technologies, Inc. and Rockwell International Corp. for HELLFIRE II development with firm-fixed-price not to exceed production options for FY 93-96. The development contract (with FY 93-96 production options) was awarded to Martin Marietta Technologies, Inc. after Rockwell, Int. chose not to bid.
** An additional option for FY 97 was added to the current production contract in Oct. 95.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
114K/Martin/FY93	1	95&Pr	A	6028	1444	4584	256	200	298	190	350	1		1									88	195	198	76	276	232	209	253	1761
114K/Martin/FY93	1	95&Pr	N	3173	595	2578	170	116	174	207	36	2											307	156	156	275	37		162	67	713
114K/HSLLC/FY96	1	FY 96	A	750	0	750																									750
114K/HSLLC/FY96	1	FY 96	MA	1563	0	1563																									1563
114K/HSLLC/FY97	1	FY 97	A	1800	0	1800																									1800
TOTAL				13314	2039	11275	426	316	472	397	386	3		1									395	351	354	351	313	232	371	320	6587

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	HELLFIRE Systems, Limited Liability Company (HSLLC)	104	250	515	18
	Orlando, Fl				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	1	8	24	32
	REORDER	3	5	23	28
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Production rate data for RIC assumes IHW version and HSLLC the HF II version. Procurement lead time reflects HF II lead time. RIC last US delivery was Jan 94 and last FMS delivery was Jun 94. RIC no longer has a production capability for IHW. Production rate data reflects a warm base for HF II.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY98 OCT	FY98 NOV	FY98 DEC	FY98 JAN	FY98 FEB	FY98 MAR	FY98 APR	FY98 MAY	FY98 JUN	FY98 JUL	FY98 AUG	FY98 SEP	FY99 OCT	FY99 NOV	FY99 DEC	FY99 JAN	FY99 FEB	FY99 MAR	FY99 APR	FY99 MAY	FY99 JUN	FY99 JUL	FY99 AUG	FY99 SEP	LATER
							Fiscal Year 98												Fiscal Year 99												
							Calendar Year 98												Calendar Year 99												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
114K/Martin/FY93	1	95&Pr	A	6028	4267	1761			111	305	289	235	235	235	235	116															
114K/Martin/FY93	1	95&Pr	N	3173	2460	713	357	356																							
114K/HSLLC/FY96	1	FY 96	A	750	0	750										119	235	235	161												
114K/HSLLC/FY96	1	FY 96	MA	1563	0	1563													74	235	235	235	235	235	235	79					
114K/HSLLC/FY97	1	FY 97	A	1800	0	1800																				156	235	235	235	235	704
TOTAL				13314	6727	6587	357	356	111	305	289	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	704

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	HELLFIRE Systems, Limited Liability Company (HSLLC)	104	250	515	18
	Orlando, Fl				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	1	8	24	32
	REORDER	3	5	23	28
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Production rate data for RIC assumes IHW version and HSLLC the HF II version. Procurement lead time reflects HF II lead time. RIC last US delivery was Jan 94 and last FMS delivery was Jun 94. RIC no longer has a production capability for IHW. Production rate data reflects a warm base for HF II.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
114K/Martin/FY93	1	95&Pr	A	6028	6028																									
114K/Martin/FY93	1	95&Pr	N	3173	3173																									
114K/HSLLC/FY96	1	FY 96	A	750	750																									
114K/HSLLC/FY96	1	FY 96	MA	1563	1563																									
114K/HSLLC/FY97	1	FY 97	A	1800	1096	704	235	235	234																					
TOTAL				13314	12610	704	235	235	234																					

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	HELLFIRE Systems, Limited Liability Company (HSLLC)	104	250	515	18
	Orlando, Fl				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	1	8	24	32
	REORDER	3	5	23	28
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Production rate data for RIC assumes IHW version and HSLLC the HF II version. Procurement lead time reflects HF II lead time. RIC last US delivery was Jan 94 and last FMS delivery was Jun 94. RIC no longer has a production capability for IHW. Production rate data reflects a warm base for HF II.

BUDGET ITEM JUSTIFICATION SHEET							DATE February 1997				
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Other Missiles					P-1 ITEM NOMENCLATURE LONGBOW HELLFIRE (C70300)						
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY		352	1005	1465	2000	2030	2020	2020	2060		12952
COST (in millions)	41.2	185.2	249.3	264.7	328.5	287.3	298.6	249.9	210.7		2115.4
Initial Spares (in millions)											
Total (in millions)	41.2	185.2	249.3	264.7	328.5	287.3	298.6	249.9	210.7		2115.4
Unit Cost (in millions)		0.53	0.25	0.18	0.16	0.14	0.15	0.12	0.10		0.16

Description:

Longbow HELLFIRE is the air-to-ground missile system component of the Longbow system. It is designed to defeat individual targets and substantially enhance survivability of the AH-64D Longbow Apache Helicopter. Longbow HELLFIRE uses a radio frequency guidance section. It will provide the capability to conduct battle both day and night in adverse weather and with battlefield obscurants present. With its radio frequency guidance section, the Longbow HELLFIRE complements the semi-active Laser HELLFIRE II with a true fire and forget capability, maximizing the ability of the Longbow Apache to operate in adverse weather and dramatically increases the aircraft's survivability. Further, the Longbow HELLFIRE missile provides a lock-on-before-launch (LOBL) or lock-on-after-launch (LOAL) capability depending on target range and movement parameters. Longbow does not change the AH-64 mission or role, but provides for increased mission effectiveness by enhancing lethality and survivability. The production buys support training, fielding and deployment of the AH-64D Longbow Helicopter. All three Longbow programs elements (Fire Control Radar, D Model Apache Helicopter and Longbow HELLFIRE Missile) were developed simultaneously and are scheduled to be fielded as a total system. Long Lead Items procurement in FY 95 provided for the procurement of materials for the first Low Rate Initial Production year (FY 96). This is required to meet system fielding requirements. Laser HELLFIRE and Longbow HELLFIRE are complementary. Both are required on the modern battlefield.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON LONGBOW HELLFIRE (C70300)			C. MANUFACTURER NAME Longbow Limited Liability Company			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Flyaway Costs													
All-Up-Rounds		133194	352	378	213200	1056	202	230024	1465	157	300505	2000	150
Containers								2283	1465	2	3185	2000	2
GFE Explosives		148			654			1180			1646		
Engineering Services		4247			5192			4316			4433		
Engineering Change Orders		2557			2681			3651			5026		
Fielding					776			999			1073		
Acceptance Testing		3976			1555			1858			1900		
Total Hardware		**144122**			**224058**			**244311**			**317768**		
Engineering Support													
Project Mgt Admin		3415			3759			5674			5755		
Production Engineering Support		6423			5455			3782			3865		
Total Engineering Support		**9838**			**9214**			**9456**			**9620**		
Non-Recurring													
Disposal of Tooling/Test Equipment													
IPF		12309											
Cost Reduction Program		18945			4914			2459					
Rate Tooling/Test Equipment					11100			7699					
Total Non-Recurring		**31254**			**16014**			**10158**					
Total Flyaway		**185214**			**249286**			**263925**			**327388**		
Peculiar Support Equipment													
Environmental Protection Covers								800			1117		
Total Peculiar Support Equipment								**800**			**1117**		
Gross P-1 End Item Cost		**185214**			**249286**			**264725**			**328505**		
Less PY Adv Proc													
Net P-1 Full Funding		**185214**			**249286**			**264725**			**328505**		
Plus CY Adv Procurement													
Other Non P-1 Costs													
Initial Spares													
Mods													
Total		**185214**			**249286**			**264725**			**328505**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: LONGBOW HELLFIRE (C70300)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
FY 96	Longbow Limited Liability Company (LLLC) Orlando, Fl	FFP	MICOM	Jan-96	Mar-97	352	378	Yes	Yes	*
FY 97	Longbow Limited Liability Company (LLLC) Orlando, Fl	FFP	MICOM	Jan-97	Jun-98	****1056	202	Yes	Yes	**
FY 98	Longbow Limited Liability Company (LLLC) Orlando, Fl	FFP	MICOM	Dec-97	Jun-99	1465	157	Yes	Yes	**
FY 99	Longbow Limited Liability Company (LLLC) Orlando, Fl	FFP***	MICOM	Dec-98	Jun-00	2000	150	Yes	Yes	**

REMARKS:

*System and development specifications are under government control, but the technical data package is not.

**In the Longbow HELLFIRE's transition to production, performance based specifications will be baselined and used in all production contracts.

***Planned five year multiyear contract.

****Reflects actual contract quantity which is higher than FYDP. Program savings reinvested to buy additional missiles in accordance with the Cost Reduction Plan (1056).

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: LONGBOW HELLFIRE (C70300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
114L/LLLC/FY96	1	96	A	352	0	352																		12	10	15	20	22	23	20	230
114L/LLLC/FY97	1	97	A	1056	0	1056																									1056
114L/LLLC/FY98	1	98	A	1465	0	1465																									1465
114L/LLLC/FY99	1	99	A	2000	0	2000																									2000
TOTAL				4873		4873																		12	10	15	20	22	23	20	4751

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Longbow Limited Liability Company	100	*	234	18

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	6	3	28	31
	REORDER	6	2	19	21
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*FY 95 to FY 00 facilitizing to achieve a production rate of 184 missiles on a 2-8-5 shift. No plans to procure additional tooling/ test equipment to build at full rate on 1-8-5 shift.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: LONGBOW HELLFIRE (C70300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 98 OCT	FY 98 NOV	FY 98 DEC	FY 98 JAN	FY 98 FEB	FY 98 MAR	FY 98 APR	FY 98 MAY	FY 98 JUN	FY 98 JUL	FY 98 AUG	FY 98 SEP	FY 99 OCT	FY 99 NOV	FY 99 DEC	FY 99 JAN	FY 99 FEB	FY 99 MAR	FY 99 APR	FY 99 MAY	FY 99 JUN	FY 99 JUL	FY 99 AUG	FY 99 SEP	LATER
							Fiscal Year 98												Fiscal Year 99												
							Calendar Year 98												Calendar Year 99												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
114L/LLLC/FY96	1	96	A	352	122	230	24	25	25	30	30	30	33	33																	
114L/LLLC/FY97	1	97	A	1056	0	1056									40	50	60	70	80	96	110	110	110	110	110	110					
114L/LLLC/FY98	1	98	A	1465	0	1465																					106	112	117	122	1008
114L/LLLC/FY99	1	99	A	2000	0	2000																									2000
TOTAL				**4873**	**122**	**4751**	**24**	**25**	**25**	**30**	**30**	**30**	**33**	**33**	**40**	**50**	**60**	**70**	**80**	**96**	**110**	**110**	**110**	**110**	**110**	**110**	**106**	**112**	**117**	**122**	**3008**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Longbow Limited Liability Company	100	*	234	18

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	6	3	28	31
	REORDER	6	2	19	21
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*FY 95 to FY 00 facilitizing to achieve a production rate of 184 missiles on a 2-8-5 shift. No plans to procure additional tooling/ test equipment to build at full rate on 1-8-5 shift.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: LONGBOW HELLFIRE (C70300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
114L/LLLC/FY96	1	96	A	352	352																									
114L/LLLC/FY97	1	97	A	1056	1056																									
114L/LLLC/FY98	1	98	A	1465	457	1008	126	126	126	126	126	126	126	126																
114L/LLLC/FY99	1	99	A	2000	0	2000									140	160	170	170	170	170	170	170	170	170	170					
TOTAL				4873	1865	3008	126	126	126	126	126	126	126	126	140	160	170	170	170	170	170	170	170	170	170					

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Longbow Limited Liability Company	100	*	234	* 18

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	6	3	28	31
	REORDER	6	2	19	21
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*FY 95 to FY 00 facilitizing to achieve a production rate of 184 missiles on a 2-8-5 shift. No plans to procure additional tooling/ test equipment to build at full rate on 1-8-5 shift.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	1575	1010	1020	1080	3316	5458	5403	7037		701	26600
COST (in millions)	437.0	200.9	161.3	143.1	326.6	466.0	409.5	475.9	7.1	95.3	2722.6
Initial Spares (in millions)					4.2	4.8	6.9	8.6	9.5	9.4	43.4
Total (in millions)	437.0	200.9	161.3	143.1	330.8	470.8	416.4	484.5	16.6	104.7	2766.0
Unit Cost (in millions)	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1		0.1	0.1

DESCRIPTION: This project provides procurement funds for JAVELIN, the medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The JAVELIN is hardened against countermeasures and does not require extensive training for effective employment.

The Command Launch Unit (CLU) is reusable and consists of a target acquisition device, Built-In-Test (BIT), a trigger mechanism, and appropriate interfaces.

The round includes a missile encased in a disposable launch tube assembly. Attached to the launch tube are CLU mating connector, front and rear shock attenuators, removable front end cap, as well as a replaceable battery coolant unit (BCU), and adjustable and replaceable shoulder strap, and a replaceable desiccant.

JUSTIFICATION: The operational concept envisioned for fighting the antiarmor battle requires an effective, extended range, manportable, fire-and-forget, weapon for dismounted combat forces. JAVELIN's fire-and-forget technology allows the gunner to fire and immediately take cover, move to another fighting position or to reload. The JAVELIN provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against stationary and moving targets. The JAVELIN is capable of operating at twice the range (2000m) of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system will have a secondary mission of destroying bunkers and will provide defensive capability against hovering helicopters. The CLU can be used in a stand-alone mode for battlefield surveillance and target selection.

There were 3605 rounds procured through FY1997. Another 1080 are scheduled for procurement in FY1998 under the second year award of a three-year multiyear contract. The remaining 21,915 are planned for purchase in subsequent years.
The Marine Corps is also procuring the Javelin.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)			C. MANUFACTURER NAME Joint Venture TI/MM			D. DATE February 1997		
Missiles	ID	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
Cost Elements	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
All Up Round		101918	1010	101	72236	1020	71	67538	1080	63	202313	3316	61
Engineering Services		14272			6848			4852			6729		
Engineering Change Orders		1325			795			786			2265		
Contractor Prod Engineering Support		20041			11968			10378			11858		
Acceptance Testing		840			1498			1205			186		
Fielding		568			505			722			1937		
Subtotal Missile Hardware		**138964**			**93850**			**85481**			**225288**		
Procurement Support													
Government Project Mgt Admin		6391			5056			4455			4220		
Government Production Engineering Admin		9513			8119			8422			11682		
Pub/Tech Data		577			417			279			329		
Subtotal Support Cost		**16481**			**13592**			**13156**			**16231**		
Non-Recurring Production		1458			1451			1035			19668		
Total Missile Flyaway		**156903**			**108893**			**99672**			**261187**		
Command & Launch Hardware													
Command Launch Unit		20172	108	187	24394	206	118	26326	270	98	39228	423	93
Engineering Services		2614			2072			1095			666		
Engineering Change Orders		228			269			306			439		
Contractor Prod Engineering Support		3967			4146			4396			2448		
Fielding		6315			2612			4627			3155		
Non-Recurring Production		266			2373			1979			3160		
Total CLU Flyaway		**33562**			**35866**			**38729**			**49096**		
Training Devices													
Field Tactical Trainer - Student Station		6310	54	117	13283	129	103	3293	39	84	12332	180	69
Field Tactical Trainer - Instructor Station		644	23	28	281	13	22	174	10	17	665	39	17
Basic Skills Trainer		3209	16	201	2545	15	170	1084	8	136	2708	24	113
Missile Simulation Round		230	111	2	413	174	2	160	80	2	635	333	2
SubTotal Support Cost		**10393**			**16522**			**4711**			**16340**		
Gross P-1 End Cost		**200858**			**161281**			**143112**			**326623**		
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		**200858**			**161281**			**143112**			**326623**		
PLUS P-1 CY Adv. Proc.					34000								
Other Non P-1 Costs													
Initial Spares													
MODS											4209		
TOTAL		**200858**			**195281**			**143112**			**330832**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $000	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
All Up Round										
FY 96	Joint Venture TI/MM*	SS/FFP	MICOM	Feb-96	Nov-98	1010	101			
FY 97	Joint Venture TI/MM*	SS/FFP	MICOM	May-97	Oct-99	1020	71			
FY 98	Joint Venture TI/MM*	SS/FFP	MICOM	Dec-97	Oct-00	1080	63			
FY 99	Joint Venture TI/MM*	SS/FFP	MICOM	Dec-98	Oct-01	3316	61			
Command Launch Unit										
FY 96	Joint Venture TI/MM*	SS/FFP	MICOM	Feb-96	Oct-98	108	187			
FY 97	Joint Venture TI/MM*	SS/FFP	MICOM	May-97	Oct-99	206	118			
FY 98	Joint Venture TI/MM*	SS/FFP	MICOM	Dec-97	Oct-00	270	98			
FY 99	Joint Venture TI/MM*	SS/FFP	MICOM	Dec-98	Oct-01	423	93			

REMARKS: * Lewisville TX; Orlando, FL

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY98 OCT	FY98 NOV	FY98 DEC	FY98 JAN	FY98 FEB	FY98 MAR	FY98 APR	FY98 MAY	FY98 JUN	FY98 JUL	FY98 AUG	FY98 SEP	FY99 OCT	FY99 NOV	FY99 DEC	FY99 JAN	FY99 FEB	FY99 MAR	FY99 APR	FY99 MAY	FY99 JUN	FY99 JUL	FY99 AUG	FY99 SEP	LATER
										Fiscal Year 98 / Calendar Year 98														Fiscal Year 99 / Calendar Year 99									
All Up Round	1	FY94	A	703	703																									
	1	FY95	A	872	872																									
	1	FY96	A	1010	0	1010		91	91	92	92	92	92	92	92	92	92	92												
	1	FY97	A	1020	0	1020													61	61	61	61	97	97	97	97	97	97	97	97	
	1	FY97	MC	141	0	141																35	35	35	36						
	1	FY98	A	1080	0	1080			A																					1080
	1	FY98	MC	194	0	194			A																					194
	1	FY99	A	3316	0	3316															A									3316
	1	FY99	MC	741	0	741															A									741
Command Launch Unit	1	FY94	A	55	55																									
	1	FY95	A	97	97																									
	1	FY 96	A	108	0	108	9	9	9	9	9	9	9	9	9	9	9	9												
	1	FY 97	A	206	0	206													5	8	12	12	17	17	19	20	21	21	27	27	
	1	FY 97	MC	48	0	48																8	8	8	6	6	6	6			
	1	FY98	A	270	0	270			A																					270
	1	FY98	MC	140	0	140			A																					140
	1	FY99	A	423	0	423															A									423
	1	FY99	MC	153	0	153															A									153
TOTAL				10577	1727	8850	9	100	100	101	101	101	101	101	101	101	101	101	66	69	73	116	157	157	158	123	124	124	124	124	6317

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
	All Up Round				
1	Joint Venture Texas Instruments/Lockheed Martin (LRIP)	80	110	140	
1	Joint Venture Texas Instruments/Lockheed Martin (FRP)	300	300	720	
	Command Launch Unit				
1	Joint Venture Texas Instruments/Lockheed Martin (LRIP)	6	6	15	
1	Joint Venture Texas Instruments/Lockheed Martin (FRP)	20	35	90	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	INITIAL	6	8	16	24	
	REORDER	7	5	19	24	
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
All Up Round	1	FY94	A	703	703																									
	1	FY95	A	872	872																									
	1	FY96	A	1010	1010																									
	1	FY97	A	1020	1020																									
	1	FY97	MC	141	141																									
	1	FY98	A	1080	0	1080	90	90	90	90	90	90	90	90	90	90	90	90												
	1	FY98	MC	194	0	194	16	16	16	16	16	16	16	16	16	16	17	17												
	1	FY99	A	3316	0	3316													276	276	276	276	276	276	276	276	277	277	277	277	
	1	FY99	MC	741	0	741													62	62	62	62	62	62	62	62	61	62	61	61	
Command Launch Unit	1	FY94	A	55	55																									
	1	FY95	A	97	97																									
	1	FY 96	A	108	108																									
	1	FY 97	A	206	206																									
	1	FY 97	MC	48	48																									
	1	FY98	A	270	0	270	22	22	22	22	22	22	22	22	22	22	22	28												
	1	FY98	MC	140	0	140	12	12	12	12	12	12	12	12	12	12	12	8												
	1	FY99	A	423	0	423													35	35	35	35	35	35	35	35	35	35	35	38	
	1	FY99	MC	153	0	153													13	13	13	13	13	13	13	13	13	13	13	10	
TOTAL				10577	4260	6317	140	140	140	140	140	140	140	140	140	140	141	143	386	386	386	386	386	386	386	386	386	387	386	386	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
	All Up Round					1	INITIAL	6	8	16	24	
							REORDER	7	5	19	24	
1	Joint Venture Texas Instruments/Lockheed Martin (LRIP)	80	110	140			INITIAL					
1	Joint Venture Texas Instruments/Lockheed Martin (FRP)	300	300	720			REORDER					
							INITIAL					
	Command Launch Unit						REORDER					
1	Joint Venture Texas Instruments/Lockheed Martin (LRIP)	6	6	15			INITIAL					
1	Joint Venture Texas Instruments/Lockheed Martin (FRP)	20	35	90			REORDER					
							INITIAL					
							REORDER					

Simulator and Training Device Justification

Date: February 1997

Appropriation / P-1 Line Item	Weapon System (if applicable)	Equipment Nomenclature	PE
MISSILE PROCUREMENT/JAVELIN (AAWS-M) SYSTEM SUMMARY	Javelin (AAWS-M) Training Devices (H06300)	See Training System Description Paragraph	

Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total
Quantity (Each)									
Proc ($OOO)	26621	16522	4711	16340	29926	25678	27765		147563
RDT&E ($OOO)									
O&S ($OOO)									

TRAINING SYSTEM DESCRIPTION:

1. Field Tactical Trainer (FTT) Student Station - This item will be used to teach force-on-force tactics and practice tasks to prepare for the U.S. Army Training Evaluation Program (ARTEP) and U.S. Marine Corps Readiness Evaluation System.

2. The FTT Instructor Station - This item will be used in a traditional outdoor range environment at the institution and unit level to refine the basic individual skills required to operate the JAVELIN and for qualification training. The device will be used by the active U.S. Army and the U.S. Marine Corps.

3. Basic Skills Trainer (BST) - This item is used for development and retention of tactical and technical gunnery skills. Training will be conducted in both the institution and unit level. The training device will be used by the active U.S. Army and the U.S. Marine Corps.

4. Missile Simulation Round (MSR) - This item is a three-dimensional full-size replica, nonoperational mock-up of the JAVELIN tactical round. It is capable of attachment to a tactical Command Launch Unit (CLU). It will be used to practice handling, and assembly/disassembly procedures with the CLU. Additionally, it will be used in field handling and mobilization tactical deployment exercises. The device will be used by the active U.S. Army and the U.S. Marine Corps.

Simulator and Training Device Justification (Page 2)

Date: February 1997

Appropriation / P-1 Line Item	Weapon System (if applicable)	IOC Date	Equipment Nomenclature	PE
MISSILE PROCUREMENT/JAVELIN (AAWS-M) SYSTEM SUMMARY	AVELIN (AAWS-M) Training Devices		See Training System Description Paragraph	

Training Device By Type	Site	Del. Date	Ready For Tng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999	
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
					Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO
FTT Student Station	Ft Benning	Apr-96	May-96	12	126	18946	129	13283	39	3293	180	12332
FTT Instructor Station	Ft Benning	Apr-96	May-96	12	36	1564	13	281	10	174	33	665
Basic Skills Trainer	Ft Benning	Aug-96	Sep-96	12	23	5383	15	2545	8	1084	24	2708
Missile Simulation Round	Ft Benning	Oct-95	Nov 95	12	228	728	174	413	80	160	333	635
Total						26621		16522		4711		16340

Simulator and Training Device Justification (Page 3)

DATE: February 1997

Training Device By Type: FTT Student Station

Weapon System (if applicable): Javelin (AAWS-M) Weapon System

Description / Justification:

This item will be used to teach force-on-force tactics and practice tasks to prepare for the U.S. Army Evaluation Programs and the U.S. Marine Corps Readiness Evaluation System.

Financial Plan	Prior Years		FY 1997		FY 1998		FY 1999		Cost To Complete		Total Cost	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO	Each	$OOO
HARDWARE COSTS												
Device (hardware)	126	13901	129	11353	39	2582	180	11195	1070	59925	1544	98956
Engineering Change Order		153		125		28		126		60		492
Nonrecurring		2022		326		264		295		1029		3936
Production Eng Support		2870		1479		419		716		3050		8534
SubTotal Hardware Costs	**126**	**18946**	**129**	**13283**	**39**	**3293**	**180**	**12332**	**1070**	**64064**	**1544**	**111918**
SubTotal Support Costs												
TOTAL COSTS		**18946**		**13283**		**3293**		**12332**		**64064**		**111918**

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Other Missiles				P-1 ITEM NOMENCLATURE JAVELIN (AAWS-M) (ADV PROC) (CC0007)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (in millions)	0.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: These advance procurement funds will provide economic order quantities for year two and year three of the Javelin three-year multiyear procurement. JAVELIN is a medium antitank system for infantry, scouts, and combat engineers. These forces must have the capability to defeat numerically superior armored forces. The JAVELIN, a replacement for the DRAGON, is a medium range, manportable antitank system for use in all forms of maneuver operations. It can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship and air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and battlefield obscurant conditions. The system's soft launch permits firing from a fighting position or from an enclosure. The JAVELIN is hardened against countermeasures and does not require extensive training for effective employment.

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a)
(COMPARISON OF REQUEST TO EXECUTION)

(TOA, Dollars in Thousands)

CURRENT YEAR FOR FISCAL YEAR PROGRAM: 1997

DATE: February 1997

Weapon System Type (Model/Series No.)	FIRST SYSTEM AWARD DATE	FIRST SYSTEM COMPLETION DATE	INTERVAL BETWEEN SYSTEM COMPLETIONS *(MONTHS)*
JAVELIN (AAWS-M) (ADV PROC) (CC0007)	May 1997	August 2000	

Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. CFE						
2. GFE (Specify)						
3. SUBTOTAL						
4. EOQ (MYP)	4396	Dec-97	Dec-98	24	34000	34000
5. (CFE)						
6. (GFE) (Specify)						
7. SUBTOTAL					**34000**	**34000**
8. Design						
9. Other (Indicate Specific Items)						
10. TOTAL					**34000**	**34000**

NARRATIVE DESCRIPTION

These funds will procure economic order quantities for Javelin all up round (4396); command launch unit (693); field tactical trainer, student station (219); field tactical trainer, instructor station (49); and basic skills trainer (32). These funds will be awarded on year one of the Javelin three-year multiyear contract. The multiyear contract will be awarded May 97 with an option for year two to be awarded in Dec 97 and option two for year three in Dec 98.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: TOW 2 SYSTEM SUMMARY (C59300)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	144783										144783
COST (in millions)	2256.2	9.7	13.6	1.3	0.0	0.0	0.0	0.0	0.0		2280.8
Initial Spares (in millions)	20.2										20.2
Total (in millions)	2276.4	9.7	13.6	1.3							2301.0
Unit Cost (in millions)	0.016										0.016

DESCRIPTION: TOW (Tube-Launched, Optically-Tracked, Wire-Guided Missile System) is designed to fulfill, the Heavy Antitank Assault Weapon System requirement for Close Combat Maneuver Forces. TOW is used primarily to destroy formations of armored vehicles, but is also an effective assault weapon against vehicles, field fortifications, and emplacements. TOW was a part of a combined united nations interagency force in Somalia and may be used against other regional threats. TOW can be fired from a ground tripod or from specifically adapted vehicles, e.g., ITV, Bradley, HMMWV, and Cobra. TOW is designated as the point target weapon on selected helicopters. TOW 2 has two distinct improvements, increase performance/hardening and a 6" full caliber warhead. TOW 2A added a small shaped tip of the TOW 2 probe to counter reactive armor, TOW 2B is an improvement to TOW 2 lethality based on a new warhead, fuze, and software to obtain a fly-over-shoot-down missile.

JUSTIFICATION: FY 98 funding is required to complete plant transition/closure.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON TOW 2 SYSTEM SUMMARY (C59300)			C. MANUFACTURER NAME			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
Missile Contract													
GFE													
Engineering Change Orders													
(Value Engineering)													
SUBTOTAL MISSILE HARDWARE													
Non-Recurring Costs													
Capstan Block		5000			4600								
Plant Transition/Closure		1650			5868			1029					
SUBTOTAL NONRECURRING COST		**6650**			**10468**			**1029**					
PROCUREMENT SUPPORT-RECURRING													
Contractor Engineering													
Production Engineering		1775			1767			150					
Government Test													
Project Management Admin		1113			1261			147					
Fielding		108			75								
SUBTOTAL		**2996**			**3103**			**297**					
Total Flyaway		**9646**			**13571**			**1326**					
Support Cost													
Peculiar Support Equipment													
Launcher (N/S)													
Training Device (B/S)													
DMPE													
Engineering Change Orders													
Other (Specify) FDT		40											
SUBTOTAL SUPPORT COST		**40**											
Gross P-1 End Cost		**9686**			**13571**			**1326**					
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		**9686**			**13571**			**1326**					
PLUS P-1 CY Adv. Proc.													
Other Non P-1 Costs													
Initial Spares					2311			5717			5821		
MODS		40728			16			62755			63774		
TOTAL		**50414**			**15898**			**69798**			**69595**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: TOW 2 SYSTEM SUMMARY (C59300)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
FY 1996	Hughes Aircraft Tucson, AZ	SS/FFP	MICOM	Aug-96	N/A	N/A	N/A	N/A	N/A	
FY 1997 Support & Plant Transition/Closure	Hughes Aircraft Tucson, AZ	TBD	MICOM	Jun-97	N/A	N/A	N/A	N/A	N/A	
FY 1998 Complete Plant Transition/Closure	Hughes Aircraft Tucson, AZ	TBD	MICOM	TBD	N/A	N/A	N/A	N/A	N/A	

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: TOW 2 SYSTEM SUMMARY (C59300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
TOW 2 Missile	1	95 & PR	A	42735	40144	2591													600	600	541					850					
	1	95 & PR	M	10601	10601																										
	1	95 & PR	MA	7702	7491	211																		31		180					
	1	FY96	MA	4865	0	4865																		1015		1003					2847
	1	FY 97	MA	3231	0	3231																									3231
TOTAL				69134	58236	10898													600	600	541			1046		2033					6078

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	Hughes Aircraft Co, Tucson, AZ	500	500	1000	18

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	INITIAL	12	3	15	18	
	REORDER		3	15	18	
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: TOW 2 SYSTEM SUMMARY (C59300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
TOW 2 Missile	1	95 & PR	A	42735	42735																									
	1	95 & PR	M	10601	10601																									
	1	95 & PR	MA	7702	7702																									
	1	FY96	MA	4865	2018	2847	2531	316																						
	1	FY 97	MA	3231	0	3231								333	562					2336										
TOTAL				69134	63056	6078	2531	316						333	562					2336										

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Hughes Aircraft Co, Tucson, AZ	500	500	1000	18

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	INITIAL		12	3	15	18	
	REORDER			3	15	18	
	INITIAL						
	REORDER						
	INITIAL						
	REORDER						
	INITIAL						
	REORDER						
	INITIAL						
	REORDER						

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT ARMY/Activity 2

P-1 ITEM NOMENCLATURE: MLRS ROCKET (C65400)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	478398	1326	1674	0	534	576	240	978	1290		485016
COST (in millions)	3569.7	44.6	41.4	2.9	19.0	19.9	19.8	54.0	62.6		3833.9
Initial Spares (in millions)											
Total (in millions)	3569.7	44.6	41.4	2.9	19.0	19.9	19.8	54.0	62.6		3833.9
Unit Cost (in millions)	0.01	0.03	0.02		0.04	0.03	0.08	0.06	0.05		0.01

DESCRIPTION: The Extended Range (ER) Multiple Launch Rocket System (MLRS) includes the rocket assembly which is a tube-launched, spin stabilized, free flight rocket. Major assemblies of the rocket are a fuzed warhead, a rocket motor, four fins, a fin opening/restraint device, and four sabots. The rocket is packaged in a six rocket pod and can be fired one at a time or in ripples of two to six. The ER-MLRS rocket will enhance the capability of the existing MLRS by providing improvements in range, accuracy and effectiveness, and maneuver force safety (improved submunitions with self destruct fuzes).

JUSTIFICATION: The objective of the system provides counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The increased range gives positioning flexibility and improves lateral ranging of targets on tomorrow's wider battlefronts. Operation Desert Storm identified the need for increased range to defeat long range targets. ER-MLRS will accomplish this mission.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT ARMY/Activity 2			B. WEAPON MLRS EXTENDED RANGE ROCKET (C65402)			C. MANUFACTURER NAME			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$Million	Each	$	$Million	Each	$	$Million	Each	$	$Million	Each	$
FLY-AWAY COSTS													
HARDWARE													
Tactical Round (Less GFE)		25.669	1326	19358	28.865	1500	19243	0.000	0		11.628	534	21775
M85 Submunition		8.209	686868	12	7.540	630924	12	0.000	0		2.863	276612	10
Engineering Services		8.777			2.426			0.918			2.508		
Engineering Change Orders		0.740			1.225			0.000			0.190		
Fielding					0.000			0.063			0.062		
SUBTOTAL		43.395			40.056			0.981			17.251		
PROCUREMENT SUPPORT													
Project Management Admin		0.618			1.240			1.277			1.315		
Test & Evaluation		0.489			0.000			0.495			0.276		
Service Support Contract		0.105			0.108			0.110			0.113		
SUBTOTAL		1.212			1.348			1.882			1.704		
TOTAL		44.607			41.404			2.863			18.955		
GROSS P-1 END COST		44.607			41.404			2.863			18.955		
LESS: PRIOR YR ADV. PROC.													
NET P-1 FULL FUNDING COST		44.607			41.404			2.863			18.955		
PLUS CURRENT YEAR ADV. PROC.													
OTHER NON P-1 WEAPON SYSTEM COSTS													
INITIAL SPARES													
MODS													
TOTAL		44.607			41.404			2.863			18.955		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT ARMY/Activity 2

C. P-1 ITEM NOMENCLATURE: MLRS EXTENDED RANGE ROCKET (C65402)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Tactical Round (Less GFE)/ER-MLRS										
FY 94 & Prior	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM					Yes	No	
FY 96	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	Jan-98	1326	19358	No	No	
FY 97*	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Feb-97	May-98	1500	19243	No	No	
FY 99	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Dec-98	May-00	534	21775	No	No	

REMARKS: NO TACTICAL ROCKETS PROCURED IN FY 95.

* Quantity differs from FYDP to reflect best current estimate.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS EXTENDED RANGE ROCKET (C65402)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Tactical Round (Less GFE)	1	94 & Pr	A	477396	477396	0																								0
																														0
Tactical Round (Less GFE)			FMS	26244	24066	2178															270	216	120	450	450	450	222				0
																															0
ER-MLRS	2	FY 96	A	1326	0	1326											A														1326
																															0
	2	FY 97	A	1500	0	1500																	A								1500
																															0
	2	FY98			0																										0
																															0
	2	FY 99	A	534	0	534																									534
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
TOTAL				**507000**	**501462**	**5538**															**270**	**216**	**120**	**450**	**450**	**450**	**222**				**3360**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	Lockheed Martin Vought Systems, Dallas, TX	2000			12
2	Lockheed Martin Vought Systems, Dallas, TX	2000			12

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	8	2	18	20
	REORDER	0	2	18	20
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

NO TACTICAL ROCKETS PROCURED IN FY 95.

REDUCED RANGE PRACTICE ROCKETS DELIVERED 4Q97.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS EXTENDED RANGE ROCKET (C65402)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 99 / Calendar Year 99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
Tactical Round (Less GFE)	1	94 & Pr	A	477396	477396	0																									0
																															0
Tactical Round (Less GFE)			FMS	26244	26244	0																									0
																															0
ER-MLRS	2	FY 96	A	1326	0	1326				330	330	330	336																		0
																															0
	2	FY 97	A	1500	0	1500								60	120	120	150	120	120	150	120	180	84	120	156						0
																															0
	2	FY 98	A	0	0	0																									0
																															0
	2	FY 99	A	534	0	534															A										534
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
TOTAL				**507000**	**503640**	**3360**				**330**	**330**	**330**	**336**	**60**	**120**	**120**	**150**	**120**	**120**	**150**	**120**	**180**	**84**	**120**	**156**						**534**

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin Vought Systems, Dallas, TX	2000			12
2	Lockheed Martin Vought Systems, Dallas, TX	2000			12

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	8	2	18	20
	REORDER	0	2	18	20
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

NO TACTICAL ROCKETS PROCURED IN FY 95.

REDUCED RANGE PRACTICE ROCKETS DELIVERED 1Q98.

FY 96 QUANTITIES REFLECT NON-STANDARD PRODUCTION BASED ON CONTRACT.

FMS DELIVERIES ANTICIPATED DURING APR 99 TO APR 00

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS EXTENDED RANGE ROCKET (C65402)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Tactical Round (Less GFE)	1	94 & Pr	A	477396	477396	0																								0
																														0
Tactical Round (Less GFE)	1		FMS	26244	26244	0																								0
																														0
ER-MLRS	2	FY 96	A	1326	1326	0																								0
																														0
	2	FY 97	A	1500	1500	0																								0
																														0
	2	FY 98	A	0	0	0																								0
																														0
	2	FY 99	A	534	0	534								48	48	48	48	48	48	48	48	48	48	48	6						0
																														0
																														0
																														0
																														0
																														0
																														0
																														0
																														0
																														0
																														0
																														0
																														0
TOTAL				507000	506466	534								48	48	48	48	48	48	48	48	48	48	48	6						

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin Vought Systems, Dallas, TX	2000			12
2	Lockheed Martin Vought Systems, Dallas, TX	2000			12

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	8	2	18	20
	REORDER	0	2	18	20
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

NO TACTICAL ROCKETS PROCURED IN FY 95.

FMS DELIVERIES ANTICIPATED DURING APR 99 TO APR 00.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT ARMY/Activity 2

P-1 ITEM NOMENCLATURE: MLRS LAUNCHER (C65900)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	754			29	32	59	79	85	88		1126
COST (in millions)	1898.3	81.1	103.7	102.6	92.5	158.3	208.7	216.9	230.7		3092.8
Initial Spares (in millions)	153.9	5.1		1.0	7.1	8.6	16.5	23.2	27.3		242.6
Total (in millions)	2052.2	86.2	103.7	103.6	99.6	166.9	225.2	240.0	258.0		3335.4
Unit Cost (in millions)	2.7			3.6	3.1	2.8	2.9	2.8	2.9		3.0

DESCRIPTION: The Multiple Launch Rocket System (MLRS) provides a high volume of fire power in a very short timeframe. Operationally, the concept is designed for the mobility, flexibility, and range requirements of the modern battlefield. Mounted on a derivative of the Bradley Fighting Vehicle (BFV), the 12-round launcher/loader requires a crew of three personnel to conduct launching missions. The design range in excess of 30 kilometers will allow coverage of 90 percent of the targets available at that range. Starting in FY 98 an Improved Fire Control System (IFCS) and an Improved Launcher Mechanical System (ILMS) will be procured and become part of the M270A1 upgrade. The IFCS is a modification to the current Fire Control System which provides the interface with the Fire Direction Center, the Munitions Controls and the MLRS Launcher. The IFCS will upgrade the system's electronics providing increased processing capability, an embedded global positioning system for future munitions and improved fault isolation for ease of launcher maintenance. The ILMS will allow faster target engagement on time sensitive, short dwell time targets and greatly reduces time on the firing point and reload operations in order to improve the survivability of the crew and the launcher. MLRS was jointly developed under a Memorandum of Understanding, signed July 1979, with France, Germany and the United Kingdom; Italy was added in July 1982. FY 96 and FY 97 program support funds are required for previously fielded launchers and to field launchers procured in FY 93, FY 94 and FY 95. FY 96 and FY 97 funds provide for remanufactured launchers for the South Carolina, Arkansas and South Dakota NG. Initial Spares to support launcher remanufacture in FY 96 and FY 97 are included in the total procurement cost. FY 98 and out quantities are for M270A1 upgrades. FY 98-03 funding also includes five batteries of rebuilt launchers for deployment to MLRS Heavy Divisions.

JUSTIFICATION: The objectives of the system are counterfire and suppression of enemy air defenses, light materiel, and personnel targets. The system is designed for adaptation to other warheads such as scatterable mines, terminally guided munitions, and other smart munitions. MLRS is the Army's rocket launch platform for the next decade. The IFCS provides faster response times for high priority targets, enhances survivability, supports attack operations, mitigates electronic hardware obsolescence and reduces O&S costs. The ILMS decreases stow to aim point timeline, enhances effectiveness in engaging and supporting the force, and increases MLRS platform survivability.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT ARMY/Activity 2			B. WEAPON MLRS LAUNCHER (C65900)			C. MANUFACTURER NAME			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$Million	Each	$	$Million	Each	$	$Million	Each	$	$Million	Each	$
GROUND EQUIPMENT HARDWARE													
Launcher		11.144	29	384286	13.450	35	384286	42.310	21	2014762	55.672	32	1739750
Carrier (GFE)		4.656	29	160552	7.069	35	201971				5.664	32	177000
LP/C Trainer		1.491	58	25707	1.405	70	20071	0.461	42	10976	0.718	64	11219
2X9 Launcher					22.145			25.035					
Peculiar Support Equipment		23.056			18.285								
Engineering Services		22.286			24.916			25.609			18.243		
Engineering Change Orders		0.068			0.100			1.505			0.823		
Fielding		8.290			7.002			0.000			3.315		
SUBTOTAL		**70.991**			**94.372**			**94.920**			**84.435**		
PROCUREMENT SUPPORT													
Project Management Admin		9.213			8.439			6.215			6.462		
Service Support Contract		0.889			0.892			1.514			1.560		
SUBTOTAL		**10.102**			**9.331**			**7.729**			**8.022**		
TOTAL		**81.093**			**103.703**			**102.649**			**92.457**		
GROSS P-1 END COST		81.093			103.703			102.649			92.457		
LESS: PRIOR YR ADV. PROC.													
NET P-1 FULL FUNDING COST		81.093			103.703			102.649			92.457		
PLUS CURRENT YEAR ADV. PROC													
OTHER NON P-1 WEAPON SYSTEM COSTS													
INITIAL SPARES		5.077			0.000			0.998			7.098		
MODS		27.475			6.410			2.188			2.239		
MOD SPARES		2.051			1.829			0.991			0.635		
TOTAL		**196.789**			**215.645**			**209.475**			**194.886**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT ARMY/Activity 2

C. P-1 ITEM NOMENCLATURE: MLRS LAUNCHER (C65900)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Launcher M270										
FY 95	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Mar-95	Nov-96	20	1826400	Yes	No	
Launcher Remanufacture										
FY 96	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Aug-96	May-97	29	384286	Yes	No	
FY 97	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Nov-96	Nov-97	35	384286	Yes	No	
Launcher M270A1										
FY 98*	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Oct-97	Apr-00	21	2014762	Yes	No	
FY 99	Lockheed Martin Vought Sys, Dallas, TX	SS/FFP	PEO-Tactical Missiles/MICOM	Oct-98	Mar-01	32	1739750	Yes	No	

REMARKS: First deliveries of FY 96 remanufacture launchers by Red River Army Depot (RRAD) Oct 96; contract with Lockheed Martin Vought System delivers 20 launchers starting May 97.

* Quantity differs from the FYDP to reflect the current best estimate.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS LAUNCHER (C65900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY96 OCT	FY96 NOV	FY96 DEC	FY96 JAN	FY96 FEB	FY96 MAR	FY96 APR	FY96 MAY	FY96 JUN	FY96 JUL	FY96 AUG	FY96 SEP	FY97 OCT	FY97 NOV	FY97 DEC	FY97 JAN	FY97 FEB	FY97 MAR	FY97 APR	FY97 MAY	FY97 JUN	FY97 JUL	FY97 AUG	FY97 SEP	LATER
							CY96	CY96	CY96	CY96	CY96	CY96	CY96	CY96	CY96	CY96	CY96	CY96	CY97	CY97	CY97	CY97	CY97	CY97	CY97	CY97	CY97	CY97	CY97	CY97	
Launcher M270	1	95 & Pr	A	772	690	82	4	6							17			9	7	3	8	3	4	7	1	5	2				6
																															0
			NG	85	56	29			5	12	6				6																0
																															0
			FMS	108	57	51												6				5	2	4	5		3	5	5	4	12
																															0
		FY96	FMS	20	0	20														5	1										14
																															0
Launcher Remanufacture	2	FY 96	A	29	0	29											A		1	1	1	3	3			3	3	3	3	3	5
																															0
	2	FY 97	A	35	0	35														A											35
																															0
Launcher M270A1	3	FY 98	A	21	0	21																									21
																															0
	3	FY 99	A	32	0	32																									32
																															0
																															0
																															0
																															0
																															0
																															0
																															0
																															0
TOTAL				1102	803	299	4	6	5	12	6				23			15	8	9	10	11	9	11	6	8	8	8	8	7	125

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin Vought Sys, Dallas, TX	2	4	10	
2	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	
3	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	8	2		2
	REORDER	0	2		2
2	INITIAL	7	2		2
	REORDER	0	2		2
3	INITIAL	8	2	30	32
	REORDER	0	2	30	32
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

In FY 96, 9 launchers with deliveries beginning in Oct 96 will be remanufactured at RRAD in support of NG requirements.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS LAUNCHER (C65900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY98 OCT	FY98 NOV	FY98 DEC	FY98 JAN	FY98 FEB	FY98 MAR	FY98 APR	FY98 MAY	FY98 JUN	FY98 JUL	FY98 AUG	FY98 SEP	FY99 OCT	FY99 NOV	FY99 DEC	FY99 JAN	FY99 FEB	FY99 MAR	FY99 APR	FY99 MAY	FY99 JUN	FY99 JUL	FY99 AUG	FY99 SEP	LATER
Launcher M270	1	95 & Pr	A	772	766	6						1	3	2																	0
																															0
			NG	85	85	0																									0
																															0
			FMS	108	96	12	4			5	1	2																			0
																															0
		FY96	FMS	20	6	14	1	5	5							3															0
																															0
Launcher Remanufacture	2	FY 96	A	29	24	5	3	2																							0
																															0
	2	FY 97	A	35	0	35		1	3	3	3	3	3	3	3	3	3	3	3	1											0
																															0
Launcher M270A1	3	FY 98	A	21	0	21	A																								21
																															0
	3	FY 99	A	32	0	32													A												32
																															0
																															0
																															0
																															0
																															0
																															0
					0																										0
					0																										0
TOTAL				1102	977	125	8	8	8	8	4	6	6	5	3	6	3	3	3	1											53

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	FY98												FY99													

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	Lockheed Martin Vought Sys, Dallas, TX	2	4	10	
2	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	
3	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	8	2		2
	REORDER	0	2		2
2	INITIAL	7	2		2
	REORDER	0	2		2
3	INITIAL	8	2	30	32
	REORDER	0	2	30	32
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FMS deliveries anticipated Nov 98 thru Mar 00.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS LAUNCHER (C65900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Launcher M270	1	95 & Pr	A	772	772	0																								0
																														0
			NG	85	85	0																								0
																														0
			FMS	108	108	0																								0
																														0
		FY96	FMS	20	20	0																								0
																														0
Launcher Remanufacture	2	FY 96	A	29	29	0																								0
																														0
	2	FY 97	A	35	35	0																								0
																														0
Launcher M270A1	3	FY 98	A	21	0	21							2	2	2	2	2	2	2	2	1	2	2								0
																														0
	3	FY 99	A	32	0	32																		2	2	2	2	3	3	3	15
																														0
																														0
																														0
																														0
																														0
																														0
					0																									0
					0																									0
TOTAL				**1102**	**1049**	**53**							**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**15**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin Vought Sys, Dallas, TX	2	4	10	
2	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	
3	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	8	2		2
	REORDER	0	2		2
2	INITIAL	7	2		2
	REORDER	0	2		2
3	INITIAL	8	2	30	32
	REORDER	0	2	30	32
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FMS delliveries anticipated Nov 98 thru Mar 00.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MLRS LAUNCHER (C65900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 02 / Calendar Year 02												Fiscal Year 03 / Calendar Year 03										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Launcher M270	1	95 & Pr	A	772	772	0																								0
																														0
			NG	85	85	0																								0
																														0
			MC	18	18	0																								0
																														0
			FMS	108	108	0																								0
																														0
		FY96	FMS	20	20	0																								0
																														0
Launcher Remanufacture	2	FY 96	A	29	29	0																								0
																														0
	2	FY 97	A	35	35	0																								0
																														0
Launcher M270A1	3	FY 98	A	21	21	0																								0
																														0
	3	FY 99	A	32	17	15	3	3	3	3	3																			0
																														0
																														0
																														0
																														0
																														0
																														0
TOTAL				**1120**	**1105**	**15**	**3**	**3**	**3**	**3**	**3**																			

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin Vought Sys, Dallas, TX	2	4	10	
2	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	
3	Lockheed Martin Vought Sys, Dallas, TX	2	6	12	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	8	2		2
	REORDER	0	2		2
2	INITIAL	7	2		2
	REORDER	0	2		2
3	INITIAL	8	2	30	32
	REORDER	0	2	30	32
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Simulator and Training Device Justification

Date: February 1997

Appropriation / P-1 Line Item	Weapon System (if applicable)	Equipment Nomenclature	PE
MISSILE PROCUREMENT/MLRS LAUNCHER	MLRS LAUNCHER	LAUNCHER MAINTENANCE TRAINER	C65900

Fin Plan	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total
Quantity (Each)	0	0	2	2	0	2	0	0	6
Proc $Million	0.000	0.000	2.000	2.000	0.000	2.000	0.000	0.000	6.000
RDT&E ($Million)									0.000
O&S ($Million)									0.000

TRAINING SYSTEM DESCRIPTION:

The MLRS Launcher Maintenance Trainer is used by the Ordnance Missile and Munitions Center and School (OMMCS) to provide training in troubleshooting and maintenance procedures for the MOS 27M. The trainer consists of a classroom station to provide computer controlled troubleshooting simulations, a Launcher Loader Module (LLM) mockup to provide hands-on maintenance training (remove/replace) and an Electronics Repair Station to provide training in Automated Test Equipment (ATE) and off-launcher repair. Trainer density increases with M270A1 fielding requirements.

Simulator and Training Device Justification (Page 2)

Date: February 1997

Appropriation / P-1 Line Item	Weapon System (if applicable)	IOC Date	Equipment Nomenclature	PE
MISSILE PROCUREMENT/MLRS LAUNCHER	MLRS LAUNCHER	Mar 00	Launcher Maintenance Trainer	C65900

Training Device By Type	Site	Del. Date	Ready For Tng Date	Avg Student Thruput	Prior Years		FY 1997		FY 1998		FY 1999	
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
					Each	$Million	Each	$Million	Each	$Million	Each	$Million
Maintenance	Redstone Arsenal, AL	Sep-99	Mar-00	12 per class					2	2.000	2	2.000
Total										2		2

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	1597	120	97	153	160	160	160				2447
COST (in millions)	1024.0	121.3	91.8	97.8	103.0	100.1	111.6	13.8	0.0		1663.4
Initial Spares (in millions)	2.3		1.0	0.9							4.2
Total (in millions)	1026.3	121.3	92.8	98.7	103.0	100.1	111.6	13.8			1667.6
Unit Cost (in millions)	0.6	1.0	1.0	0.6	0.6	0.6	0.7				0.7

DESCRIPTION: The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. The inherent GPS accuracies will be achievable independent of range. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. Army TACMS includes Guided Missile and Launching Assembly; Test Set, Guided Missile System; Training Set, Guided Missile System: M-165; Trainer, Test Device, Guided Missile: M70; Modified M270 Launcher; and the Army TACMS Missile Facilities.

JUSTIFICATION: The Army TACMS is air transportable and provides a deep fires missile system that operates in near all-weather conditions, day or night. It is used to attack tactical surface-to-surface missile sites, air defense missile sites, logistics elements and command/control/communications complexes. The Block IA missile will destroy high value targets at ranges approximately twice that of the current Block I. The Block IA will be especially suited for destroying enemy surface-to-surface missile system launchers.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)			C. MANUFACTURER NAME Lockheed Martin Vought Systems			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
Prime Contract		76978	120	641	65290	97	673	87886	153	574	92080	160	576
GFE								128			128		
Flight Kits		378			1216			318			3100		
Engineering Services		16631			14806			9977			8666		
Engineering Change Orders (ECOs)		1862			1094			827			870		
Fielding		579			142			520			270		
Subtotal Missile Hardware		**96428**			**82548**			**99656**			**105114**		
Procurement Support													
Project Management Admin		5599			3906			4138			4246		
Production Engineering Support		7743			4537			5992			6288		
Test and Evaluation		4546			824			3668			3002		
Subtotal Procurement Support		**17888**			**9267**			**13798**			**13536**		
TOTAL MISSILE FLYAWAY		**114316**			**91815**			**113454**			**118650**		
Command & Launch Integration													
Command & Launch Integration Spt		755						1040			1750		
Subtotal C&L Integration		**755**						**1040**			**1750**		
Support Cost													
Missile Test Device		2704											
ATMF Test and Support Equipment		3528											
Subtotal Support Cost		**6232**											
Gross P-1 End Cost		**121303**			**91815**			**114494**			**120400**		
Less: Prior Year Adv Proc								16680			17440		
Net P-1 Full Funding Cost		**121303**			**91815**			**97814**			**102960**		
PLUS P-1 CY Adv. Proc.					69000								
Other Non P-1 Costs													
Initial Spares					963			943					
MODS													
TOTAL		**121303**			**161778**			**98757**			**102960**		

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON ATACMS BLK I (C98500)			C. MANUFACTURER NAME Lockheed Martin Vought Systems			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
Prime Contract		33200	50	664									
GFE													
Flight Kits													
Engineering Services		5850											
Engineering Change Orders (ECOs)		791											
Fielding		135											
Subtotal Missile Hardware		**39976**											
Procurement Support													
Project Management Admin		3845											
Production Engineering Support		5216											
Test and Evaluation		2733											
Subtotal Procurement Support		**11794**											
TOTAL MISSILE FLYAWAY		**51770**											
Command & Launch Integration													
Command & Launch Integration Spt													
Subtotal C&L Integration													
Support Cost													
Missile Test Device													
ATMF Test and Support Equipment													
Subtotal Support Cost													
Gross P-1 End Cost		**51770**											
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		**51770**											
PLUS P-1 CY Adv. Proc.													
Other Non P-1 Costs													
Initial Spares													
MODS													
TOTAL		**51770**											

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON ATACMS BLK IA (C98501)			C. MANUFACTURER NAME Lockheed Martin Vought Systems			D. DATE February 1997		
Missiles	ID	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
Cost Elements	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
Prime Contract		43778	70	625	65290	97	673	87886	153	574	92080	160	576
GFE								128			128		
Flight Kits		378			1216			318			3100		
Engineering Services		10781			14806			9977			8666		
Engineering Change Orders (ECOs)		1071			1094			827			870		
Fielding		444			142			520			270		
Subtotal Missile Hardware		**56452**			**82548**			**99656**			**105114**		
Procurement Support													
Project Management Admin		1754			3906			4138			4246		
Production Engineering Support		2527			4537			5992			6288		
Test and Evaluation		1813			824			3668			3002		
Subtotal Procurement Support		**6094**			**9267**			**13798**			**13536**		
TOTAL MISSILE FLYAWAY		**62546**			**91815**			**113454**			**118650**		
Command & Launch Integration													
Command & Launch Integration Spt		755						1040			1750		
Subtotal C&L Integration		**755**						**1040**			**1750**		
Support Cost													
Missile Test Device		2704											
ATMF Test and Support Equipment		3528											
Subtotal Support Cost		**6232**											
Gross P-1 End Cost		**69533**			**91815**			**114494**			**120400**		
Less: Prior Year Adv Proc								16680			17440		
Net P-1 Full Funding Cost		**69533**			**91815**			**97814**			**102960**		
PLUS P-1 CY Adv. Proc.					69000								
Other Non P-1 Costs													
Initial Spares					963			943					
MODS													
TOTAL		**69533**			**161778**			**98757**			**102960**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 2 / Other Missiles

C. P-1 ITEM NOMENCLATURE: ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
Army TACMS Block I Missile										
FY 96	LMVS, Dallas, TX	SS/FP	MICOM	Nov-95	Mar-97	50	664			
Army TACMS Block IA Missile										
FY 96	LMVS, Dallas, TX	SS/FP	MICOM	Jun-96	Aug-97	70	625			
FY 97	LMVS, Dallas, TX	SS/FP	MICOM	Apr-97	May-98	97	673	No	Yes	Oct-96
FY 98	LMVS, Dallas, TX	SS/FP	MICOM	Dec-97	May-99	153	574	No	Yes	Oct-96
FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Oct-98	Mar-00	160	576			

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY96 OCT	FY96 NOV	FY96 DEC	FY96 JAN	FY96 FEB	FY96 MAR	FY96 APR	FY96 MAY	FY96 JUN	FY96 JUL	FY96 AUG	FY96 SEP	FY97 OCT	FY97 NOV	FY97 DEC	FY97 JAN	FY97 FEB	FY97 MAR	FY97 APR	FY97 MAY	FY97 JUN	FY97 JUL	FY97 AUG	FY97 SEP	LATER
							Fiscal Year 96												Fiscal Year 97												
							Calendar Year 96												Calendar Year 97												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Army TACMS Block I Missile		94 & Pr	A	1449	1374	75	15	15	15	15	15																			
	1	FY 95	A	148	0	148						14	13	13	12	12	12	12	12	12	12	12								
	1	FY 96	A	50	0	50		A															10	10	10	10	10			
	1	FY 94	N	3	3																									
	1	FY 96	MA	72	0	72									A													2	4	66
Army TACMS Block IA Missile	1	FY 96	A	70	0	70									A													7	7	56
	1	FY 97	A	97	0	97																	A							97
	1	FY 98	A	153	0	153																								153
	1	FY 99	A	160	0	160																								160
TOTAL				2202	1377	825	15	15	15	15	15	14	13	13	12	12	12	12	12	12	12	12	12	10	10	10	10	10	9	11	532
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	LMVS, Dallas, TX	*10	38	48	15

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		1	16	17
	REORDER		1	16	17
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*The minimum sustaining rate is 120 per year or 10 per month. However, at increased cost and risk, a reduced production rate can be accommodated

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 98 OCT	FY 98 NOV	FY 98 DEC	FY 98 JAN	FY 98 FEB	FY 98 MAR	FY 98 APR	FY 98 MAY	FY 98 JUN	FY 98 JUL	FY 98 AUG	FY 98 SEP	FY 99 OCT	FY 99 NOV	FY 99 DEC	FY 99 JAN	FY 99 FEB	FY 99 MAR	FY 99 APR	FY 99 MAY	FY 99 JUN	FY 99 JUL	FY 99 AUG	FY 99 SEP	LATER
							Calendar Year 98															Calendar Year 99									
Army TACMS Block I Missile		94 & Pr	A	1449	1449																									
	1	FY 95	A	148	148																									
	1	FY 96	A	50	50																									
	1	FY 94	N	3	3																									
	1	FY 96	MA	72	6	66	6	10	10	10	10	10	10																	
Army TACMS Block IA Missile	1	FY 96	A	70	14	56	8	8	8	8	8	8	8																	
	1	FY 97	A	97	0	97								8	8	8	8	8	8	8	8	8	8	9						
	1	FY 98	A	153	0	153			A																15	15	16	15	16	76
	1	FY 99	A	160	0	160													A											160
TOTAL				**2202**	**1670**	**532**	**14**	**18**	**18**	**18**	**18**	**18**	**18**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**9**	**15**	**15**	**16**	**15**	**16**	**236**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	LMVS, Dallas, TX	*10	38	48	15

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL			1	16	17
	REORDER			1	16	17
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

REMARKS

*The minimum sustaining rate is 120 per year or 10 per month. However, at increased cost and risk, a reduced production rate can be accommodated

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Army TACMS Block I Missile		94 & Pr	A	1449	1449																								
	1	FY 95	A	148	148																								
	1	FY 96	A	50	50																								
	1	FY 94	N	3	3																								
	1	FY 96	MA	72	72																								
Army TACMS Block IA Missile	1	FY 96	A	70	70																								
	1	FY 97	A	97	97																								
	1	FY 98	A	153	77	76	15	16	15	15	15																		
	1	FY 99	A	160	0	160						14	13	14	13	13	14	13	13	14	13	13	13							
TOTAL				2202	1966	236	15	16	15	15	15	14	13	14	13	13	14	13	13	14	13	13	13							

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	LMVS, Dallas, TX	*10	38	48	15

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		1	16	17
	REORDER		1	16	17
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*The minimum sustaining rate is 120 per year or 10 per month. However, at increased cost and risk, a reduced production rate can be accommodated

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Other Missiles				P-1 ITEM NOMENCLATURE ARMY TACTICAL MSL SYS (ATACMS) - (ADV PROC) (C98510)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (in millions)	0.0	69.0	0.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: Funding for economic order quantity (EOQ) for the FY 98-01 Multiyear Procurement of Army TACMS. The Army TACMS is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel anti-materiel (APAM) warhead. The Army TACMS Block IA integrates global positioning system (GPS) components and increases the range of the Block I missile. Army TACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270 launcher and are being deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries.

JUSTIFICATION: The EOQ funding is required for the buy out of the total Improved Missile Guidance Sets required for the multiyear procurement of the Army TACMS.

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a)
(COMPARISON OF REQUEST TO EXECUTION)

(TOA, Dollars in Thousands)

CURRENT YEAR FOR FISCAL YEAR PROGRAM: 1997

DATE: February 1997

Weapon System Type (Model/Series No.)	FIRST SYSTEM AWARD DATE	FIRST SYSTEM COMPLETION DATE	INTERVAL BETWEEN SYSTEM COMPLETIONS *(MONTHS)*
ARMY TACTICAL MSL SYS (ATACMS) - (ADV PROC)	Dec-97	May-99	

Advance Procurement / Advance Funding Items Requested / Actual	Quantity	Date Contract Award Required / Actual	Date Delivery of First Equipment Required / Actual	Production Lead Time in Months Total Requested (Adm/Prod) Actual (Adm/Prod)	Total Cost Requested	Actual Contract Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. CFE						
2. GFE (Specify)						
3. SUBTOTAL						
4. EOQ (MYP)	633	Jun-97	Sep-98	15	69000	
5. (CFE)						
6. (GFE) (Specify)						
7. SUBTOTAL					**69000**	
8. Design						
9. Other (Indicate Specific Items)						
10. TOTAL					**69000**	

NARRATIVE DESCRIPTION

The bulk of the $69M in FY 97 will be used to buy out the total 633 Improved Missile Guidance Sets (IMGS) units required for the FY 98-01 Multiyear Procurement.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
MISSILE PROCUREMENT /Other Missiles	ATACMS/BAT (CA6101)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY					50	100	150	89	194	1223	1806
COST (in millions)					60.8	80.7	109.9	94.3	190.8	968.5	1505
Initial Spares (in millions)											
Total (in millions)					60.8	80.7	109.9	94.3	190.8	968.5	1505
Unit Cost (in millions)					1.2	0.8	0.7	1.1	1.0		

DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries. The Army TACMS Block IIA (ATACMS Block IIA) will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 6 BAT P3I submunitions as its payload. The ATACMS Block IIA will be launched from the M270 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA.

JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organization. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight. The mission of the ATACMS Block IIA will be to delay, disrupt, or destroy the Block II target sets plus cold stationary tanks and armored combat vehicles as well as moving and stationary surface-to-surface missile (SSM) transporter erector launchers (TELs) at extended ranges. The Block IIA missile will dispense 6 BAT P3I submunitions at ranges beyond the Block II system.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: ATACMS BLK II (CA6105)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY					50	100	150	89	144	673	1206
COST (in millions)					60.8	80.7	109.9	84.5	128.3	509.1	973
Initial Spares (in millions)											
Total (in millions)					60.8	80.7	109.9	84.5	128.3	509.1	973
Unit Cost (in millions)					1.2	0.8	0.7	0.8	0.8		

DESCRIPTION: The Army Tactical Missile System Block II (ATACMS BLK II), a version of the currently fielded and combat-proven Army TACMS Block I missile, will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 13 BATs or P3I BATs as its payload. It will be launched from the Multiple Launch Rocket System (MLRS) modified M270 launcher and will be deployed within the ammunition loads of corps MLRS battalions and/or division artillery MLRS batteries.

JUSTIFICATION: The primary mission of the ATACMS BLK II is to delay, disrupt, neutralize, or destroy armored combat vehicles/organizations. ATACMS BLK II will carry and dispense BAT and BAT P3I submunitions deep in enemy territory where these submunitions will automatically track and destroy targets. Global Positioning System (GPS) technology will increase accuracy in flight.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Other Missiles

P-1 ITEM NOMENCLATURE: ATACMS BLK IIA (CA6110)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY									50	550	600
COST (In millions)								9.9	62.5	459.3	532
Initial Spares (in millions)											
Total (In millions)								9.9	62.5	459.3	532
Unit Cost (in millions)									1.3		

DESCRIPTION: The Army TACMS Block IIA (ATACMS Block IIA) will be a ground launched, solid propellant, inertially guided (GPS aided) missile system with 6 BAT P3I submunitions as its payload. The ATACMS Block IIA will be launched from the M270 launcher in response to the same Command and Control (C2) nodes applicable to the Block I, Block IA, and Block II missiles. Since the Block IIA payload only houses 6 submunitions rather than 13, as in the Block II, it is capable of achieving extended ranges comparable to the Block IA.

JUSTIFICATION: The mission of the ATACMs Block IIA will be to delay, disrupt, or destroy the Block II target sets plus cold stationary tanks and armored combat vehicles as well as moving and stationary surface-to-surface missile (SSM) transporter erector launchers (TELs) at extended ranges. The Block IIA missile will dispense 6 BAT P3I submunitions at ranges beyond the Block II system.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO: MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON: ATACMS BLK II (CA6105)			C. MANUFACTURER NAME: Lockheed Martin Vought Sys			D. DATE: February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
Prime Contract (Includes IPF)													
GFE											39548	50	791
Flight Kits											1659		
Engineering Services											569		
Engineering Change Orders (ECOs)											1408		
Fielding											250		
Subtotal Missile Hardware											**43434**		
Procurement Support													
Project Management Admin											1940		
Production Engineering Support											2081		
Test and Evaluation											6251		
Subtotal Procurement Support											**10272**		
TOTAL MISSILE FLYAWAY											**53706**		
Command & Launch Integration													
Command & Launch Integration Spt											920		
Subtotal C&L Integration											**920**		
Support Cost													
Missile Test Device											2560		
ATMF Test and Support Equipment											3595		
Subtotal Support Cost											**6155**		
Gross P-1 End Cost											**60781**		
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost											**60781**		
PLUS P-1 CY Adv. Proc.													
Other Non P-1 Costs													
Initial Spares													
MODS													
TOTAL											**60781**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / Other Missiles

C. P-1 ITEM NOMENCLATURE: ATACMS/BAT (CA6105)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
ATACMS BLK II										
FY 99	LMVS, Dallas, TX	SS/FP	MICOM	Jan-99	Jul-00	50	791			

REMARKS:

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ATACMS/BAT (CA6105)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
ATACMS BLK II	1	FY 99	A	50		50																							50
TOTAL				50		50																							50

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	LOCKHEED MARTIN VOUGHT SYS, Dallas, TX	*10	38	48	15

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		4	17	21
	REORDER		4	17	21
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*The minimum sustaining rate is 120 per year or 10 per month. However, at increased cost and risk, a reduced production rate can be accommodated.

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ATACMS/BAT (CA6105)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
ATACMS BLK II	1	FY 99	A	50		50																A								50
TOTAL				50		50																								50

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	LOCKHEED MARTIN VOUGHT SYS, Dallas, TX	*10	38	48	15

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		4	17	21
	REORDER		4	17	21
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

*The minimum sustaining rate is 120 per year or 10 per month. However, at increased cost and risk, a reduced production rate can be accommodated.

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ATACMS/BAT (CA6105)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
ATACMS BLK II	1	FY 99	A	50		50										4	4	4	4	4	4	4	4	4	4	5	5				
TOTAL				50		50										4	4	4	4	4	4	4	4	4	4	5	5				

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
---	---	---	---	---	---	---	---	---	---	---	---	---
1	LOCKHEED MARTIN VOUGHT SYS, Dallas, TX	*10	38	48	15	1	INITIAL		4	17	21	*The minimum sustaining rate is 120 per year or 10 per month. However, at increased cost and risk, a reduced production rate can be accommodated.
							REORDER		4	17	21	
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

BUDGET ITEM JUSTIFICATION SHEET					DATE February 1997						
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Other Missiles					P-1 ITEM NOMENCLATURE BAT (CA6100)						
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY				305	547	1500	1900	2200	2900	10519	19871
COST (in millions)				85.2	100.1	170.3	200.8	200.1	238.9	762.5	1757.9
Initial Spares (in millions)											
Total (in millions)				85.2	100.1	170.3	200.8	200.1	238.9	762.5	1757.9
Unit Cost (in millions)				0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1

DESCRIPTION: The BAT submunition is an anti-armor, top attack submunition with acoustic and infrared (IR) seekers working in tandem for autonomous attack of operating armored vehicles. The BAT is a guided submunition that searches for, tracks, and destroys armored, mobile targets. The Pre-Planned Product Improvement (P3I) BAT uses millimeter wave, infrared, and acoustic seekers in tandem to attack additional target arrays which include cold stationary or dug-in targets and surface-to-surface missile transporter erector launchers.

JUSTIFICATION: The BAT submunitions will be carried deep into enemy territory by the Army Tactical Missile System (ATACMS) Block II. It will be dispensed over numerous high-payoff targets to selectively attack and destroy individual targets. By utilizing acoustic technology, BAT has the advantage of a large footprint which allows it to compensate for target location errors.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 2 / Other Missiles			B. WEAPON BAT (CA6100)			C. MANUFACTURER NAME Northrop Grumman Corp			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Missile Hardware- Recurring													
Prime Contract (Includes IPF)								74188	305	243	82232	547	150
GFE													
Flight Kits													
Engineering Services											4553		
Engineering Change Orders (ECOs)								1496			2646		
Fielding											7		
Subtotal Missile Hardware								**75684**			**89438**		
Procurement Support													
Project Management Admin								2920			3440		
Production Engineering Support								3819			5189		
Test and Evaluation								2213			2000		
Subtotal Procurement Support								**8952**			**10629**		
TOTAL MISSILE FLYAWAY								**84636**			**100067**		
Command & Launch Integration													
Command & Launch Integration Spt													
Subtotal C&L Integration													
Support Cost													
Missile Test Device													
ATMF Test and Support Equipment								572			70		
Subtotal Support Cost								**572**			**70**		
Gross P-1 End Cost								**85208**			**100137**		
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost								**85208**			**100137**		
PLUS P-1 CY Adv. Proc.													
Other Non P-1 Costs													
Initial Spares													
MODS													
TOTAL								**85208**			**100137**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / Other Missiles

C. P-1 ITEM NOMENCLATURE: BAT (CA6100)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
BAT										
FY 98	Northrop Grumman Hawthorne, CA	SS/FPI	MICOM	Jan-98	Sep-99	305	243			
FY 99	Northrop Grumman Hawthorne, CA	SS/FPI	MICOM	Mar-99	Sep-00	547	150			

REMARKS:

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BAT (CA6100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
BAT	1	FY 98	A	305		305																									305
	1	FY 99	A	547		547																									547
TOTAL				852		852																									852

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	NORTHROP GRUMMAN CORP, Hawthorne, CA	120	240	600	12

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	INITIAL		4	20	24	
	REORDER		4	20	24	
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BAT (CA6100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
BAT	1	FY 98	A	305		305				A																				7	298
	1	FY 99	A	547		547																		A							547
TOTAL				852		852																								7	845

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	NORTHROP GRUMMAN CORP, Hawthorne, CA	120	240	600	12

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL			4	20	24
	REORDER			4	20	24
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

REMARKS

FY 1998 / FY 1999 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BAT (CA6100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
BAT	1	FY 98	A	305	7	298	3	15	12	17	17	22	27	40	45	50	50														
	1	FY 99	A	547		547												50	55	60	62	64	64	64	64	64					
TOTAL				852	7	845	3	15	12	17	17	22	27	40	45	50	50	50	55	60	62	64	64	64	64	64					

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	NORTHROP GRUMMAN CORP, Hawthorne, CA	120	240	600	12

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		4	20	24
	REORDER		4	20	24
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Modification of Missles				P-1 ITEM NOMENCLATURE PATRIOT MODS (C50700)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.8	23.4	20.8	15.6	19.6	24.3	19.9	16.5

DESCRIPTION: The PATRIOT Weapon System Growth Program is in response to a Report of the Defense Science Board Task Force on PATRIOT Vulnerability (1978) (SECRET) and the Air Threat to Central Europe (1978-1988) ATCE-1988 (SECRET) dated 1 Aug 78, and was part of the Mid 1980 ASARC/DSARC process approving the initiation of PATRIOT production.

JUSTIFICATION: The above funding is required to support the planned system Growth Program P3I, anticipated Materiel Changes which will add the following hardware enhancements/improvements to the PATRIOT Weapon System:

BUDGET ITEM JUSTIFICATION SHEET	DATE
	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
MISSILE PROCUREMENT /Modification of Missles	PATRIOT MODS (C50700)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-88-03-1224	BLOCK VII							
	10.2	4.0	0.4	0.0	0.0	0.0	0.0	0.0
1-88-03-1227	WEAPON CONTROL COMPUTER (WCC) UPGRADE							
	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-92-03-1235	CDI PHASE I							
	3.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0
1-93-03-1237	COMMUNICATION ENHANCEMENTS							
	0.0	0.0	9.7	9.0	12.4	14.9	15.2	12.5
1-89-03-1230	BLOCK VIII (RAM MODS)							
	0.0	0.0	4.6	6.6	7.2	9.4	4.7	4.0
1-95-03-1243	AIR CONDITIONER UPGRADE							
	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0
1-97-03-1244	INTEGRATED DIAGNOSTIC SUPPORT SYSTEM							
	0.0	6.1	6.1	0.0	0.0	0.0	0.0	0.0
1-97-03-1245	GEM PLUS/MINUS							
	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Totals	70.0	23.4	20.8	15.6	19.6	24.3	19.9	16.5

MODIFICATION INSTALLATION SUMMARY

Date: February 1997

(TOA, Dollars in Millions)

System/Modification	py FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
PATRIOT MODS									
C50700									
BLOCK VII	3.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.8
WEAPON CONTROL COMPUTER (WCC) UPGRADE	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
CDI PHASE I	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8
COMMUNICATION ENHANCEMENTS	0.0	0.0	0.9	0.8	1.1	1.3	1.4	1.1	6.6
BLOCK VIII (RAM MODS)	0.0	0.0	0.4	0.6	0.7	0.9	0.4	0.3	3.3
AIR CONDITIONER UPGRADE	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3
INTEGRATED DIAGNOSTIC SUPPORT SYSTEM	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4
GEM PLUS/MINUS	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Totals	10.4	1.2	1.6	1.4	1.8	2.2	1.8	1.4	21.8

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: BLOCK VII 1-88-03-1224

MODELS OF SYSTEMS AFFECTED: Radar Set,ECS, ICC, LS, BME, BMG, CRG

DESCRIPTION / JUSTIFICATION:

This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this Materiel Change involve improvements to the Radar Set, Engagement Control Station, Information and Coordination Central, Launching Station, Battalion Maintenance Equipment/Group, Communications Relay Group and ISE/PFASC Shop Sets. The purpose of this MC is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED

Major Milestones not applicable.

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	BLOCK VII 1-88-03-1224																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E	None																			
PROCUREMENT																				
Kit Quantity																				
Installation Kits	253	6.6	60	3.9	19	0.3													332	10.8
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	253	3.6																	253	3.6
FY 1997 Eqpt -- Kits			60	0.1															60	0.1
FY 1998 Eqpt -- Kits					19	0.1													19	0.1
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	253	3.6	60	0.1	19	0.1													332	3.8
Total Procurement Cost		10.2		4.0		0.4														14.6

METHOD OF IMPLEMENTATION Contractor Field Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 1997: Dec 96 FY 1998: Dec 97 FY 1999:

Delivery Date: FY 1997: Jun 97 FY 1998: Jun 98 FY 1999:

Installation Schedule: BLOCK VII 1-88-03-1224 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	197	28	28																			253
FY 1997				15	15	15	15															60
FY 1998								19														19
FY 1999																						
Outputs																						
FY 1996 & Prior	169	28	28	28																		253
FY 1997					15	15	15	15														60
FY 1998									19													19
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: WEAPON CONTROL COMPUTER (WCC) UPGRADE 1-88-03-1227

MODELS OF SYSTEMS AFFECTED: ECS & ICC

DESCRIPTION / JUSTIFICATION:

This task's objective is to increase (by four times) the speed and memory size of the current Weapon Control Computer (WCC) though replacement with a Very High Speed Integrated Circuit (VHSIC) WCC. The current WCC in the Engagement Control Station (ECS) and Information and Coordination Central (ICC) will be replaced by the VHSIC WCC. Peripheral devices which will permit the full utilization of the expanded WCC will be implemented by the replacement of the current Recovery Storage Unit (RSU) and the Mass Storage Unit (MSU) with an optical disk. This MC requires WCC software enhancements to be blocked with others in a Post Deployment Build 4(PDB-4). The Materiel Change will increase central processing speed throughout and available memory. Current RAM hardware usage is at 95% eliminating future growth. VHSIC technology and expanded memory will accomodate future throughput and growth.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4QFY90	4QFY90
Critical Design Review:	2QFY91	2QFY90
Contractor Test and Evaluation:	1QFY92	1QFY92
Development Test and Evaluation:	2QFY92	3QFY92
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	N/A	N/A
TDP Available:	N/A	N/A

INDIVIDUAL MODIFICATION																	Date	February 1997	
MODIFICATION TITLE (Cont):	WEAPON CONTROL COMPUTER (WCC) UPGRADE 1-88-03-1227																		
FINANCIAL PLAN: ($ in Millions)																			
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		27.2																		27.2
PROCUREMENT																				
Kit Quantity																				
Installation Kits	110	49.9																	110	49.9
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	110	6.1																	110	6.1
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	110	6.1																	110	6.1
Total Procurement Cost		56.0																		56.0

METHOD OF IMPLEMENTATION Depot Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: WEAPON CONTROL COMPUTER (WCC) UPGRADE 1-88-03-1227 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	100	4	3	3																		110
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	97	3	4	3	3																	110
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: CDI PHASE I 1-92-03-1235

MODELS OF SYSTEMS AFFECTED: RADAR SET

DESCRIPTION / JUSTIFICATION:

Provides improvements to the identification process and enhances air defense effectiveness by reducing the potential for fratricide and providing better battlefield management of missile expenditures.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Development effort completed.

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4QFY90	1QFY91
Critical Design Review:	3QFY91	4QFY91
Contractor Test and Evaluation:	2QFY92	3QFY92
Development Test and Evaluation:	2QFY92	1QFY94
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	N/A	N/A
TDP Available:	N/A	N/A

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): CDI PHASE I 1-92-03-1235

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		14.6																		14.6
PROCUREMENT																				
Kit Quantity																				
Installation Kits	19	3.1	2	0.2															21	3.3
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	19	0.7																	19	0.7
FY 1997 Eqpt -- Kits			2	0.1															2	0.1
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	19	0.7	2	0.1															21	0.8
Total Procurement Cost		3.8		0.3																4.1

METHOD OF IMPLEMENTATION: Contractor Mod Team — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	Nov 96	FY 1998:	FY 1999:	
Delivery Date:	FY 1997:	May 97	FY 1998:	FY 1999:	

Installation Schedule: CDI PHASE I 1-92-03-1235 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	14	2	3																			19
FY 1997				2																		2
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	13	1	2	3																		19
FY 1997					2																	2
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: COMMUNICATION ENHANCEMENTS 1-93-03-1237

MODELS OF SYSTEMS AFFECTED: Fire Unit

DESCRIPTION / JUSTIFICATION:

Communications Enhancements focuses on intra-battalion communications and improved interoperability at the fire unit level for contingency operations. It provides additional interfaces for told-in intelligence source; CADCI to provide automated switching within the battalion and permits fire unit voice and data interface into the Army Common User System (ACUS); high speed filters to permit access into long haul data transmission means; and, a fiber optic port to provide a local area network (LAN) interface with the battery command post.
international agreements requirements.

This is a subset of the full Remote Launch/Communication Enhancement Upgrade Program.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Communication Upgrade Development Program was initiated in FY95 and is ongoing

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4QFY95	3QFY96
Critical Design Review:	1QFY96	4QFY96
TDP Available:	N/A	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): COMMUNICATION ENHANCEMENTS 1-93-03-1237

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		9.4		6.1																15.5
PROCUREMENT																				
Kit Quantity																				
Installation Kits					14	8.8	14	8.2	6	11.3	7	13.6	8	13.8	4	11.4			53	67.1
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits					14	0.9													14	0.9
FY 1999 Eqpt -- Kits							14	0.8											14	0.8
FY 2000 Eqpt -- kits									6	1.1									6	1.1
FY 2001 Eqpt -- kits											7	1.3							7	1.3
FY 2002 Eqpt -- kits													8	1.4					8	1.4
FY 2003 Eqpt -- kits															4	1.1			4	1.1
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost					14	0.9	14	0.8	6	1.1	7	1.3	8	1.4	4	1.1			53	6.6
Total Procurement Cost						9.7		9.0		12.4		14.9		15.2		12.5				73.7

METHOD OF IMPLEMENTATION: Contractor Mod Team — ADMINISTRATIVE LEADTIME: 3 Months — PRODUCTION LEADTIME: 18 Months

Contract Dates: FY 1997: — FY 1998: MAR 98 — FY 1999: MAR 99

Delivery Date: FY 1997: — FY 1998: SEP 99 — FY 1999: SEP 00

Installation Schedule: COMMUNICATION ENHANCEMENTS 1-93-03-1237 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998													4	4	3	3						14
FY 1999																	4	4	3	3		14
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998														4	4	3	3					14
FY 1999																		4	4	3	3	14

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000								2	2	1	1														6
FY 2001												2	2	2	1										7
FY 2002																2	2	2	2						8
FY 2003																				2	2				4
Outputs																									
FY 2000									2	2	1	1													6
FY 2001													2	2	2	1									7
FY 2002																	2	2	2	2					8
FY 2003																					2	2			4

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: BLOCK VIII (RAM MODS) 1-89-03-1230

MODELS OF SYSTEMS AFFECTED: Radar Set, ECS, ICC, LS, BME, BMG, CRG

DESCRIPTION / JUSTIFICATION:

This modification provides corrections to problems in the field which have been identified and incorporated into ECPs. Corrections included in this Materiel Change involve improvements to the Radar Set, Engagement Control Station, Information and Coordination Central, Launching Station, Battalion Maintenance Equipment/Group, Communications Relay Group and ISE/PFASC Shop Sets. The purpose of this MC is the acquisition and installation of retrofit modification kits to bring fielded PATRIOT hardware up to the production baseline configuration.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: None

	PLANNED	ACCOMPLISHED

Major Milestones not applicable.

INDIVIDUAL MODIFICATION																		Date	February 1997	
MODIFICATION TITLE (Cont):	BLOCK VIII (RAM MODS) 1-89-03-1230																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits					127	4.2	211	6.0	369	6.5	411	8.5	225	4.3	200	3.7			1543	33.2
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits					127	0.4													127	0.4
FY 1999 Eqpt -- Kits							211	0.6											211	0.6
FY 2000 Eqpt -- kits									369	0.7									369	0.7
FY 2001 Eqpt -- kits											411	0.9							411	0.9
FY 2002 Eqpt -- kits													225	0.4					225	0.4
FY 2003 Eqpt -- kits															200	0.3			200	0.3
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost					127	0.4	211	0.6	369	0.7	411	0.9	225	0.4	200	0.3			1543	3.3
Total Procurement Cost						4.6		6.6		7.2		9.4		4.7		4.0				36.5

METHOD OF IMPLEMENTATION Contractor Field Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 1997: FY 1998: DEC 97 FY 1999: DEC 98

Delivery Date: FY 1997: FY 1998: JUN 98 FY 1999: JUN 99

Installation Schedule: BLOCK VIII (RAM MODS) 1-89-03-1230 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998								18	19	22	22	23	23									127
FY 1999												11	11	11	12	41	41	42	42			211
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998									18	19	22	22	23	23								127
FY 1999													11	11	11	12	41	41	42	42		211

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000			19	19	19	20	73	73	73	73															369
FY 2001							21	21	22	22	80	80	80	85											411
FY 2002											20	20	20	20	35	35	35	40							225
FY 2003															50	50	50	50							200
Outputs																									
FY 2000				19	19	19	20	73	73	73	73														369
FY 2001								21	21	22	22	80	80	80	85										411
FY 2002												20	20	20	20	35	35	35	40						225
FY 2003																50	50	50	50						200

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Air Conditioner Upgrade 1-95-03-1243

MODELS OF SYSTEMS AFFECTED: ICC, ECS, and CRG

DESCRIPTION / JUSTIFICATION:

The Air Conditioner Upgrade provides replacement of the cooling equipment in the Engagement Control Station, Information & Coordination Central, And Communications Relay Group. The current cooling equipment inside of these shelters has not been upgraded sufficiently since its original issue. The replacement of this equipment is required to keep pace with the increased power generation equipment being installed in the ECS, ICC, and CRG and to prevent equipment failure due to overheating. In addition, the current cooling equipment is freon based which is a hazard to both the troops and the environment.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: none

	PLANNED	ACCOMPLISHED

Major Milestones not applicable.

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Air Conditioner Upgrade 1-95-03-1243

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits			294	6.9															294	6.9
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits			294	0.3															294	0.3
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			294	0.3															294	0.3
Total Procurement Cost				7.2																7.2

METHOD OF IMPLEMENTATION Contractor Mod Team — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	OCT 96	FY 1998:		FY 1999:	
Delivery Date:	FY 1997:	APR 97	FY 1998:		FY 1999:	

Installation Schedule: Air Conditioner Upgrade 1-95-03-1243 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997				147	147																	294
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997						147	147															294
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244

MODELS OF SYSTEMS AFFECTED:

DESCRIPTION / JUSTIFICATION:

At the fire unit level, maintenance monitors defect faults and automatically access diagnostic/repair procedures in electronic TMs and expert systems. Digital communications enable secure tele-maintenance from weapons platform to factory for remote diagnostics and adjustments.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED

Major Milestones not applicable.

INDIVIDUAL MODIFICATION | Date: February 1997

MODIFICATION TITLE (Cont): INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits			7	5.9	7	5.9													14	11.8
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits			7	0.2															7	0.2
FY 1998 Eqpt -- Kits					7	0.2													7	0.2
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			7	0.2	7	0.2													14	0.4
Total Procurement Cost				6.1		6.1														12.2

METHOD OF IMPLEMENTATION Contractor Mod Team ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 Months

Contract Dates:	FY 1997:	Feb 97	FY 1998:	Feb 98	FY 1999:
Delivery Date:	FY 1997:	Oct 97	FY 1998:	Oct 98	FY 1999:

Installation Schedule: INTEGRATED DIAGNOSTIC SUPPORT SYSTEM 1-97-03-1244 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997						7																7
FY 1998										7												7
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997							7															7
FY 1998											7											7
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: GEM PLUS/MINUS 1-97-03-1245

MODELS OF SYSTEMS AFFECTED: PAC-2 Missile

DESCRIPTION / JUSTIFICATION:

Modification of existing PAC-2 missiles. Provides Cruise Missile Defense performance improvements by retrofitting PAC-2 missiles during missile recertification cycle with a Surface Acoustic Wave (SAW) Oscillator and a GEM fuze.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED

Major Milestones not applicable.

INDIVIDUAL MODIFICATION																				Date	February 1997
MODIFICATION TITLE (Cont):	GEM PLUS/MINUS 1-97-03-1245																				
FINANCIAL PLAN: ($ in Millions)																					
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits			75	5.3															75	5.3
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits			75	0.5															75	0.5
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			75	0.5															75	0.5
Total Procurement Cost				5.8																5.8

METHOD OF IMPLEMENTATION Contractor Mod Team ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

Contract Dates:	FY 1997:	Jan 99	FY 1998:	FY 1999:	
Delivery Date:	FY 1997:	Jul 97	FY 1998:	FY 1999:	

Installation Schedule: GEM PLUS/MINUS 1-97-03-1245 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997											15	20	20	20								75
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997												15	20	20	20							75
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Modification of Missles

P-1 ITEM NOMENCLATURE: STINGER MODS (C20000)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	11.3	36.9	12.4	14.4	24.1	34.5	57.0	58.7

DESCRIPTION

STINGER Block I Upgrades - Hardware and software modifications to the STINGER RMP Missile System improves performance against targets which are slow moving, employing advanced counter-measures, or operating at night. These STINGER Block I Upgrade modifications maintain compatibility with all current and planned command and launch platforms including Air-To-Air STINGER, AVENGER, and the gripstock used in shoulder fired applications.

STINGER Block I Platform Mods - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks new EEPROMS must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each systems Interface Electronics Assembly.

Bradley LINEBACKER (formerly Bradley STINGER Fighting Vehicle - Enhanced (BSFV-E)) - The Bradley LINEBACKER is an air defense system based upon minimal upgrades to the currently fielded Bradley Stinger Fighting Vehicle-Manpads Under Armor (BSFV-MUA). The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Developmental Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and a Bradley Fighting Vehicle-Operation Desert Storm Kit which are being fielded separately by CECOM and TACOM.

JUSTIFICATION

STINGER Block I Upgrades - The STINGER-RMP Missile is currently deficient in engagements against head/tail-on and slow moving targets, counter-measures, and night time engagements. There is also a safety deficiency whereby aviation platforms must super-elevate to fire the missile. The STINGER Block I Upgrade materiel change was developed to correct these deficiencies. This materiel change was recommended as the near term solution by the Air-to-Air Missile General Officer's Steering Committee.

STINGER Block I Platform Mods - In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.

Bradley LINEBACKER - The Warfighting Rapid Acquisition Panel approved the Bradley LINEBACKER as a rapid acquisition program on 26 January 95, which provided a Milestone IIIa (ASARC) decision to enter limited production to support the Army's Force XXI initiatives. An abbreviated Operational Requirements Document was approved and released by TRADOC. The Bradley LINEBACKER program leverages a portion of the fielded M2A2 Bradley Fighting Vehicle fleet, improves the employment of the approximately $2 billion STINGER missile investment, and provides an armored Air Defense Artillery (ADA) fire unit with heavy forces employing Ground Based Sensor data as provided through FAADS C2I. This modestly costed program provides more firepower for the money than any other current Army program. This materiel solution corrects major ADA deficiencies in survivability, fire control, target acquistion and identification, with a reduction in crew size as a force savings.

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Modification of Missles	P-1 ITEM NOMENCLATURE: STINGER MODS (C20000)

OSIP No. / Classification	Description / All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
01-87-03-1510	STINGER Block I Upgrades							
Operational	24.4	21.8	8.7	14.4	24.1	34.5	40.1	31.9
TBD	STINGER Platform Mods							
TBD	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
TBD	Bradley LINEBACKER							
TBD	6.3	7.1	3.7	0.0	0.0	0.0	16.9	26.9
Totals	30.7	36.9	12.4	14.4	24.1	34.5	57.0	58.7

MODIFICATION INSTALLATION SUMMARY

Date: February 1997

(TOA, Dollars in Millions)

System/Modification	PY FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
STINGER MODS									
C20000									
STINGER Block I Upgrades	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STINGER Platform Mods	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bradley LINEBACKER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: STINGER Block I Upgrades OSIP # 01-87-03-1510

MODELS OF SYSTEMS AFFECTED: STINGER RMP Missile

DESCRIPTION / JUSTIFICATION:

The STINGER Block I Upgrade materiel change incorporates hardware and software modifications to the STINGER-RMP missile system to increase overall missile performance in certain engagement scenarios and resolve a key aviation deficiency which requires aviation platforms to super-elevate. The engagement scenarios in which missile performance improves include head/tail-on and slow moving targets, counter-measures, and night time engagements. These changes include hardware changes to the missile and software changes to the command and launch platforms which include Air-to-Air STINGER, AVENGER, and gripstocks used in shoulder-fired applications. This materiel change was recommended by the Air-to-Air Missile General Officer's Steering Committee as the near term solution to the STINGER-RMP deficiencies.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Begin development	3rd Qtr FY92	3rd Qtr FY92
Production Qualification	4th Qtr FY95	4th Qtr FY95
Software Critical Design Review	4th Qtr FY96	2nd Qtr FY96
Software Performance Assessment	2nd Qtr FY97	2nd Qtr FY97

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): STINGER Block I Upgrades OSIP # 01-87-03-1510

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		30.8		3.7																34.5
PROCUREMENT																				
Kit Quantity	1,850		1,300		471		906		1,665		1,658		1,664		1,228		476		11,218	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		24.4		21.8		8.7		14.4		24.1		34.5		40.1		31.9		17.6		217.5
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware		Installation of Hardware costs are included in Equipment above.																		
FY 1996 & Prior Eqpt - Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost	1,850	24.4	1,300	21.8	471	8.7	906	14.4	1,665	24.1	1,658	34.5	1,664	40.1	1,228	31.9	476	17.6	11,218	217.5

METHOD OF IMPLEMENTATION: contractor — ADMINISTRATIVE LEAD-TIME: 3 Months — PRODUCTION LEAD-TIME: 18 Months

Contract Dates: FY 1997: 2nd Q, FY97 — FY 1998: 2nd Q, FY98 — FY 1999: 2nd Q, FY99

Delivery Date: FY 1997: 4th Q, FY98 — FY 1998: 4th Q, FY99 — FY 1999: 4th Q, FY00

Installation Schedule: STINGER Block I Upgrades OSIP # 01-87-03-1510 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	700	300	200	206	177	267																1,850
FY 1997							324	326	324	326												1,300
FY 1998											117	118	118	118								471
FY 1999															226	226	227	227				906
Outputs																						
FY 1996 & Prior	130	270	300	300	200	206	177	267														1,850
FY 1997									324	326	324	326										1,300
FY 1998													117	118	118	118						471
FY 1999																	226	226	227	227		906

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000						416	416	416	417																1,665
FY 2001										414	414	415	415												1,658
FY 2002														416	416	416	416								1,664
FY 2003																		307	307	307	307				1,228
Outputs																									
FY 2000								416	416	416	417														1,665
FY 2001													414	414	415	415									1,658
FY 2002																	416	416	416	416					1,664
FY 2003																					307	307	307	307	1,228

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: STINGER Platform Mods OSIP # TBD

MODELS OF SYSTEMS AFFECTED: Manpads, Avenger, Bradley Linebacker, OH-58D

DESCRIPTION / JUSTIFICATION:

In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For MANPADS gripstocks, new electronically erasable programmable read only memory (EEPROM) must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each system's Interface Electronics Assembly. Without modifications, Block I missiles fired from these platforms will perform as Stinger-RMP missiles, negating the Block I missile improved performance.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED

Development has been completed.

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): STINGER Platform Mods — OSIP # TBD

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	0		2,425														0		2,425	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		0.0		7.9														0.0		7.9
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost	0	0.0	2,425	7.9													0	0.0	2,425	7.9

METHOD OF IMPLEMENTATION od — ADMINISTRATIVE LEADTIME: 3 Months — PRODUCTION LEADTIME: 18 Months

Contract Dates:	FY 1997:	2nd Qtr, FY97	FY 1998:	not applicable	FY 1999: not applicable
Delivery Date:	FY 1997:	4th Qtr, FY98	FY 1998:	not applicable	FY 1999: not applicable

Installation Schedule: STINGER Platform Mods OSIP # TBD Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997						600	600	600	625													2,425
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997								600	600	600	625											2,425
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Bradley LINEBACKER OSIP # TBD

MODELS OF SYSTEMS AFFECTED: Bradley Stinger Fighting Vehicle - Manpads Under Armor (BSFV-MUA)

DESCRIPTION / JUSTIFICATION:

The Bradley LINEBACKER, formerly the Bradley Stinger Fighting Vehicle-Enhanced (BSFV-E), is an air defense system based upon minimal upgrades to the currently fielded BSFV-MUA. The Bradley LINEBACKER provides heavy maneuver forces with dedicated air defense against a variety of threat platforms. The Bradley LINEBACKER is a Non-Development Item rapid acquisition procurement to upgrade the existing BSFV-MUA with the addition of Bradley LINEBACKER modification kit. The kit includes an integrated, externally mounted Standard Vehicle Mounted Launcher with a modified fire control. It fires up to four Stinger missiles while the crew remains under armor protection. The Bradley LINEBACKER fielding maximizes the utility of the FAADS C2I Kit and the Bradley Fighting Vehicle-Operational Desert Storm Kit, which are being fielded separately by CECOM and TACOM. This materiel solution corrects major Air Defense Artillery deficiencies in survivability, fire control, target acquisition and identification with a reduction in crew size as a force savings.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Contractor technical test and evaluation	Feb-96	Mar-96
Government technical test and evaluation	Apr-96	Jul-96
Operational test and evaluation	Sep-96	Sep-96
Production decision	Nov-96	Nov-96

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Bradley LINEBACKER OSIP # TBD																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		8.8																18.0		26.8
PROCUREMENT																				
Kit Quantity	8		99		0		0						33		40		194		374	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		6.3		7.1		3.7		0.0						16.9		26.9		149.0		209.9
Equipment Nonrecurring																				
Engineering Change Orders	Proponency for Bradley LINEBACKER was transferred from Stinger PMO to Bradley PMO in FY97.																			
Data	The Army will request the $7.1M in FY97 be moved to Bradley PMO through Omnibus Reprogramming.																			
Training Equipment	FY98 and outyear funding will be used for additional Stinger Block I Upgrades (C21300) thereby reducing modification unit cost.																			
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware	Installation of Hardware costs are included in Equipment above.																			
FY 1996 & Prior Eqpt - Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost	8	6.3	99	7.1	0	3.7	0	0.0					33	16.9	40	26.9	194	149.0	374	209.9

METHOD OF IMPLEMENTATION: contractor ADMINISTRATIVE LEAD-TIME: 3 Months PRODUCTION LEAD-TIME: 3 Months

Contract Dates:	FY 1997:	2nd Qtr, FY97	FY 1998:	not applicable	FY 1999:	not applicable
Delivery Date:	FY 1997:	2nd Qtr, FY98	FY 1998:	not applicable	FY 1999:	not applicable

Installation Schedule: Bradley LINEBACKER OSIP # TBD Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	8																					8
FY 1997			1	1			40	30	27													99
FY 1998																						0
FY 1999																						0
Outputs																						
FY 1996 & Prior	8																					8
FY 1997				1	1		30	30	30	7												99
FY 1998																						0
FY 1999																						0

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									0
FY 2001																									0
FY 2002										8	8	8	9												33
FY 2003														10	10	10	10								40
Outputs																									
FY 2000																									0
FY 2001																									0
FY 2002												8	8	8	9										33
FY 2003																10	10	10	10						40

Remarks:

BUDGET ITEM JUSTIFICATION SHEET				DATE: February 1997				
APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Modification of Missles				P-1 ITEM NOMENCLATURE: ITAS/TOW MODS (C61700)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	40.7	0.0	62.8	63.8	64.4	63.8	67.7	59.9

DESCRIPTION: TOW Improved Target Acquisition System (ITAS) program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control Subsystems. The TOW ITAS will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the TOW system. Technology insertion developed for ITAS horizontally applies to Bradley TOW upgrades. ITAS takes advantage of state of the art infrared Standard Advanced Dewar Assembly (SADA) II technology to detect and recognize enemy targets day or night at greater ranges and with greater resolution. This allows the gunner to utilize TOW's maximum effective range, increasing lethality and survivability against armor and other targets. The embedded training software serves to increase gunner proficiency over that of the previous TOW system. ITAS will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of CONUS based force projection.

The missile modification (MOIC) Materiel Change (MC) provides/installs MOICs (safety requirement) on Basic/ITOW heat missiles used for training. The MOIC precludes flight motor ignition and S&A arming in the event of missile malfunction.

The objective of missile conversion and modification is to maintain a continuous source for training by utilizing out-of-production missiles (Basic TOW extended Range ITOW, rather than procuring training missiles). Mod kit procurement will continue until these missiles are depleted.

The missile conversion MC converts Basic/ITOW heat missiles to practice missiles by replacing the heat warhead with a practice warhead. It also provides for a Missile Ordnance Inhibit Circuit (MOIC-Safety Requirement) and an epoxy coated T250 maraging steel launch motor.

JUSTIFICATION: Funding is required for the ITAS program, which upgrades the detection recognition and fire control capabilities of the current Ground/HMMWV-Mounted TOW 2 System. ITAS also provides for growth potential for next generation missile. Funding is also required to maintain the production of the above essential MCs. These MCs are necessary to meet training/safety standards and upgrades the current TOW acquisition and fire control subsystems. This enhances Army posture against regionally based threats, promotes effective crisis response and increases overall readiness.

BUDGET ITEM JUSTIFICATION SHEET		DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Modification of Missles	P-1 ITEM NOMENCLATURE: ITAS/TOW MODS (C61700)	

OSIP No.	Description							
Classification	All Priors	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
MC-1-82-03-3020	MISSILE CONVERSION(HEAT TO PRACTICE)							
SAFETY	34.3	0.0	0.0	1.6	0.0	0.0	0.0	5.6
MC-1-82-03-3021	MISSILE MODIFICATION(MOIC)							
SAFETY	13.5	0.0	0.0	0.4	0.0	0.0	0.0	0.4
MC-1-89-03-3028	ITAS(IMPROVED TARGET ACQUISITION SYSTEM)							
OPERATIONAL	36.0	0.0	62.8	61.8	64.4	63.8	67.7	53.9
TOTALS	83.8	0.0	62.8	63.8	64.4	63.8	67.7	59.9

MODIFICATION INSTALLATION SUMMARY

Date: February 1997

(TOA, Dollars in Millions)

System/Modification	Prior FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
ITAS/TOW MODS									
C61700									
MISSILE CONVERSION(HEAT TO PRACTICE)	12.6	0.0	0.0	1.6	0.0	0.0	0.0	0.9	15.1
MISSILE MODIFICATION(MOIC)	4.3	0.0	0.0	0.4	0.0	0.0	0.0	0.0	4.7
ITAS(IMPROVED TARGET ACQUISITION SYSTEM)	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.5	1.5
Totals	16.9	0.0	0.1	2.1	0.2	0.3	0.3	1.4	21.3

INDIVIDUAL MODIFICATION

MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020

MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM (BGM 71A, C, D) BTM 71A (C59300)

DESCRIPTION / JUSTIFICATION:

To convert TOW Basic/ITOW heat missiles to practice missiles and to install a Missile Ordnance Inhibit Circuit (MOIC) on missiles used for training to prevent flyback the MOIC opens the circuit between the missile battery and flight motor ignition, and the safe and arming unlatch mechanism in the event of delay in ignition of the flight motor. Epoxy coated T250 maraging steel was incorporated into a new design as a result of launch motor failures (probable cause was identified as case deterioration due to stress corrosion.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	N/A	
Development Test and Evaluation:	N/A	
Inital Operational Test and Evaluation:	N/A	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	60213	21.7													4977	4.7			65190	26.4
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	55213	12.6					3328	1.6							1672	0.9			60213	15.1
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																	4977	2.7	4977	2.7
(FY(TC) Eqpt - kits																				
Total Installation Cost	55213	12.6					3328	1.6							1672	0.9	4977	2.7	65190	17.8
Total Procurement Cost		34.3						1.6								5.6		2.7		44.2

METHOD OF IMPLEMENTATIOI Depot Team — ADMINISTRATIVE LEADTIME: 24 Months — PRODUCTION LEADTIME: 15 Months

Contract Dates: FY 97 — FY 1998: — FY 1999

Delivery Date: FY 97 — FY 1998: 1Q98 — FY 1999

Installation Schedule: MISSILE CONVERSION(HEAT TO PRACTICE) MC-1-82-03-3020 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	10950					3000	2000															15950
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	21703									1664	1664											25031
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000*													836	836											1672
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

* FY 96 HARDWARE

INDIVIDUAL MODIFICATION

MISSILE MODIFICATION(MOIC) MC-1-82-03-3021

MODELS OF SYSTEMS AFFECTED: ITAS/TOW MISSILE SYSTEM (BGM 71A,C,D)BTM71A)(C59300)

DESCRIPTION / JUSTIFICATION:

To install Missile Ordnance Inhibit Circuit (MOIC) on TOW Basic/ITOW heat missile used for training to prevent flyback. The MOIC opens the circuit between the missile battery and flight motor ignitor and the safe and arming unlatch mechanisms which precludes flight motor ignitions and S&A arming in the event of a missile malfunction.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	N/A	
Development Test and Evaluation:	N/A	
Inital Operational Test and Evaluation:	N/A	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION — Date: February 1996

MODIFICATION TITLE (Cont): MISSILE MODIFICATION(MOIC) MC-1-82-03-3021

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	35667	9.2													1000	0.4			36667	9.6
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	34667	4.3					1000	0.4											35667	4.7
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																	1000	0.5	1000	0.5
(FY(TC) Eqpt -- Kits																				
Total Installation Cost	34667	4.3					1000	0.4									1000	0.5	36667	5.2
Total Procurement Cost		13.5						0.4								0.4		0.5		14.8

METHOD OF IMPLEMENTATION: Depot Team — ADMINISTRATIVE LEADTIME: 24 Months — PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1997: — FY 1998: — FY 1999:

Delivery Date: FY 1997: — 3Q97 FY 1998: — FY 1999:

Installation Schedule: MISSILE MODIFICATION(MOIC) MC-1-82-03-3021 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	2050					1000																3050
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	2050									250	250	250	250									3050
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION

ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028

MODELS OF SYSTEMS AFFECTED: I OW Missile System Launcher (59300)

DESCRIPTION / JUSTIFICATION:

TOW ITAS Program is a technology insertion program to upgrade the current TOW Target Acquisition and Fire Control subsystems. The TOW will provide improved target detection and acquisition range, improved probability of hit and enhanced fire control capabilities that will upgrade the anti armor capability of light forces using the the TOW system, it will support the U.S. Army mission of crisis response to regionally based threats and allows for TOW to continue to be integral to the strategic principle of forward presence.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:		Oct-94
Critical Design Review:		Jul-94
Contractor Test and Evaluation:		Aug-95
Development Test and Evaluation:		Jan-96
Inital Operational Test and Evaluation:		Jul-96
IPR/LRIP Production Decision		Jul-96

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		104.6		0.1																104.7
PROCUREMENT																				
Kit Quantity	25				61		92		112		128		150		117		372		1057	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		31.3				52.0		46.4		51.2		53.6		60.4		48.5		151.8		495.2
Equipment Nonrecurring																				
Engineering Change Orders																				
Data		0.7				0.8		0.8		0.6		0.2		0.2		0.2		0.5		4.0
Training Equipment		2.7				3.8		4.4		5.2		5.4		6.4		4.3		15.4		47.6
Support Equipment						2.5		7.6		6.0		4.0								20.1
Other		1.3				2.1		1.0		1.2		0.3		0.4		0.4		0.8		7.5
Interim Contractor Support						1.5		1.5												3.0
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits					16	0.1	9												25	0.1
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits							50	0.1	11										61	0.1
FY 1999 Eqpt -- Kits									76	0.2	16	0.1							92	0.3
FY 2000 Eqpt -- kits											92	0.2	20	0.1					112	0.3
FY 2001 Eqpt -- kits													106	0.2	22	0.1			128	0.3
FY 2002 Eqpt -- kits															124	0.4	26	0.1	150	0.5
FY 2003 Eqpt -- kits																	117	0.3	117	0.3
(FY(TC) Eqpt (xx kits)																	372	0.9	372	0.9
Total Installation Cost					16	0.1	59	0.1	87	0.2	108	0.3	126	0.3	146	0.5	515	1.3	1057	2.8
Total Procurement Cost		36.0				62.8		61.8		64.4		63.8		67.7		53.9		169.8		580.2

METHOD OF IMPLEMENTATION: DEPOT TEAM — ADMINISTRATIVE LEADTIME: 12 Months — PRODUCTION LEADTIME: 11 Months

Contract Dates: FY 1997: — FY 1998: 1Q98 — FY 1999: 1Q99

Delivery Date: FY 1997: — FY 1998: 1Q99 — FY 1999: 1Q00

Installation Schedule: ITAS(IMPROVED TARGET ACQUISITION SYSTEM) MC-1-89-03-3028 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior					4	2	6	6	7													25
FY 1997																						
FY 1998										15	15	15	16									61
FY 1999														21	23	24	24					92
Outputs																						
FY 1996 & Prior							4	6	6	9												25
FY 1997																						
FY 1998										5	15	15	15	11								61
FY 1999														7	21	24	24	16				92

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000					27	27	28	30																	112
FY 2001									30	32	33	33													128
FY 2002													36	36	39	39									150
FY 2003																	30	30	30	27					117
Outputs																									
FY 2000					9	27	27	29	20																112
FY 2001									10	30	33	33	22												128
FY 2002													12	36	37	39	26								150
FY 2003																	10	30	30	29	18				117

Remarks:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Modification of Missiles

P-1 ITEM NOMENCLATURE: MLRS MODS (C67500)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	27.5	6.4	2.2	2.2	2.3	2.6	2.6	2.5

DESCRIPTION: Modification kits are procured for previously manufactured MLRS launchers and the associated training and ground support equipment. The following page provides a list of approved modifications.

BUDGET ITEM JUSTIFICATION SHEET		DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Modification of Missiles	P-1 ITEM NOMENCLATURE: MLRS MODS (C67500)	

OSIP No. / Classification	Description / All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-84-03-0502	Improved Electronic Unit (IEU)							
	71.5	0.7	0.5	0.5	0.6	0.6	0.7	0.7
1-85-03-0508	Launcher Loader Module Improvements (LLM)							
	33.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
1-85-03-0509	Improved Launcher (Deep Attack) Modifications							
	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-94-03-0520	Carrier Improvements Phase IV							
	3.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
1-94-03-0522	Transmission Electronic Controller (TEC)							
	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-94-03-0525	Fire Suppression Change							
	0.0	0.8	0.1	0.1	0.0	0.0	0.0	0.0
1-94-03-0528	Interim IPDS Launcher							
	16.2	2.2	0.5	0.5	0.6	0.6	0.7	0.7
1-94-03-0529	Interim MS Launcher							
	9.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1-95-03-0530	Hoist Carriage Assembly							
	3.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0
1-95-03-Obsc	Obsolescence Mitigation/ECP Reliability Integration							
	2.2	1.4	1.0	1.0	1.0	1.3	1.1	1.0
Totals	204.2	6.4	2.2	2.2	2.3	2.6	2.6	2.5

Date
February 1997

MODIFICATION INSTALLATION SUMMARY

(TOA, Dollars in Millions)

System/Modification	PY FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
MLRS MODS									
C67500									
Improved Electronic Unit (IEU)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Launcher Loader Module Improvements (LLM)	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3
Improved Launcher (Deep Attack) Modifications	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Carrier Improvements Phase IV	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Transmission Electronic Controller (TEC)	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
Fire Suppression Change	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3
Interim IPDS Launcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interim MS Launcher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hoist Carriage Assembly	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Obsolescence Mitigation/ECP Reliability Integration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	26.9	1.1	0.1	0.1	0.0	0.0	0.0	0.0	28.2

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Improved Electronic Unit (IEU) 1-84-03-0502

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

This improvement increases the operational capability of the existing Version 4.0 software to provide the necessary growth capability for new missile and rocket programs. The IEU expands the operational memory capability of the MLRS Fire Control System (FCS) from 96K ROM and 32K RAM to 612 DRAM. Six computer interface ports, an internal magnetic bubble memory, and three more efficient minicomputers are incorporated which enhance flexibility to accommodate planned and potential warhead growth programs. The IEU allows usage of Version 6.0x reprogrammable software and can be updated by the user with a portable Program Load Unit (PLU). The Line Replaceable Unit (LRU) Test Program Set (TPS) support equipment consists of software, hardware and documentation used in conjunction with Base Shop Test Stations (BSTS) and Integrated Family of Test Equipment (IFTE) to detect and isolate LRU failures.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
	Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Improved Electronic Unit (IEU) 1-84-03-0502

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	866	36.6																	866	36.6
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment*		34.2		0.7		0.5		0.5		0.6		0.6		0.7		0.7				38.5
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- 866	866	0.7																	866	0.7
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	866	0.7																	866	0.7
Total Procurement Cost		71.5		0.7		0.5		0.5		0.6		0.6		0.7		0.7				75.8

METHOD OF IMPLEMENTATION Depot Field Application — ADMINISTRATIVE LEADTIME: Months — PRODUCTION LEADTIME: Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Improved Electronic Unit (IEU) 1-84-03-0502 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	866																					866
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	866																					866
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

*TPS Support Equipment does not require installation funding.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Launcher Loader Module Improvements (LLM) 1-85-03-0508

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

This modification retrofits fielded vehicles for the following: Adds new metal blast panels to prevent damage to front launcher cage structure and blast doors; installs new environmentally sealed limit switches; welds in stiffening plate to motor pump assembly; provides moisture tight cover to the azimuth resolver; and adds support lugs and welds to the upper elevation actuator attach fitting to improve aft corner post. These improvements are required to correct operational deficiencies identified during OT-III testing and subsequent fielding. This modification accomplishes retrofit of the fielded vehicles as part of the Block Mod Effort in conjunction with MC 1-85-03-0507.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
	Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Launcher Loader Module Improvements (LLM) 1-85-03-0508

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	433	22.2																	433	22.2
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment				0.2																0.2
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- 433	433	11.3																	433	11.3
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	433	11.3																	433	11.3
Total Procurement Cost		33.5		0.2																33.7

METHOD OF IMPLEMENTATION Depot Field Application — ADMINISTRATIVE LEADTIME: Months — PRODUCTION LEADTIME: Months

Contract Dates:	FY 1997:	FY 1998:	FY 1999:
Delivery Date:	FY 1997:	FY 1998:	FY 1999:

Installation Schedule: Launcher Loader Module Improvements (LLM) 1-85-03-0508 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	433																					433
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	433																					433
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Support equipment for Aft Corner Post modification.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Improved Launcher (Deep Attack) Modifications 1-85-03-0509

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

The Improved Launcher (Deep Attack) modification kit consists of the Payload Interface Module (PIM), with associated cables and hardware, which controls command and power distribution to the warhead and a modification to the Fire Control System (FCS) Electronic Box (EB). This modification provides for upgrade to the existing MLRS capabilities, including training devices, and is required to support the addition of Army TACMS and other growth capabilities. The Improved Launcher modification provides the necessary interfaces between the warheads, the launcher, the EB, and the Improved Electronic Unit (IEU). The modification provides the capability of supplying power to, and communication with, payload onboard processors for transmitting prelaunch programming information and for the management of payload-peculiar time-sequencing interface parameters. The PIM, as part of the Improved Launcher Mod Kit, becomes the standard payload interface module for all MLRS launchers. The incorporation of the Improved Launcher modification causes no changes to the MLRS force structure.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
	Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Improved Launcher (Deep Attack) Modifications 1-85-03-0509																			
FINANCIAL PLAN: ($ in Millions)	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	363	32.2																	363	32.2
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment		0.5																		0.5
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- 363	363	4.8																	363	4.8
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	363	4.8																	363	4.8
Total Procurement Cost		37.5																		37.5

METHOD OF IMPLEMENTATION Depot Field Application ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Improved Launcher (Deep Attack) Modifications 1-85-03-0509 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	363																					363
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	363																					363
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Carrier Improvements Phase IV 1-94-03-0520

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

This modification is a consolidation of nine (9) Class I ECPs addressing reliability, availability, maintainability, and dependability (RAM-D). Improvements include the addition of a fuel system heater valve, improved cab ventilation duct system, speedometer relocator, and a gas particulate filter unit plug for the NBC heater. This modification also corrects four (4) safety hazards by improving the commander's work station, adding a map light for tactical conditions, adding mounting provisions for an additional hand held fire extinguisher, and provides measures to prevent the existing engine compartment fire extinguisher from being inadvertently discharged.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
	Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION																		Date	February 1997	
MODIFICATION TITLE (Cont):	Carrier Improvements Phase IV 1-94-03-0520																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	758	1.1																	758	1.1
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- 758	733	2.2	25	0.1															758	2.3
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	733	2.2	25	0.1															758	2.3
Total Procurement Cost		3.3		0.1																3.4

METHOD OF IMPLEMENTATION Depot Field Application ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	FY 1998:	FY 1999:
Delivery Date:	FY 1997:	FY 1998:	FY 1999:

Installation Schedule: Carrier Improvements Phase IV 1-94-03-0520 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	733	25																				758
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	733	25																				758
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Transmission Electronic Controller (TEC) 1-94-03-0522

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

The TEC, which is an automatic electronically controlled transmission, replaces the previous hydromechanical transmission. The benefits of the TEC modification are increased power availability, ability to tow in neutral, decreased maintenance, improvements in slope capability, shift synchronism, fuel consumption, cold temperature performance, and maneuverability in restricted areas. Through the modification of the MLRS fleet of vehicles, this will allow a commonality of transmissions between all vehicle subsystems for the M270 MLRS.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
	Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Transmission Electronic Controller (TEC) 1-94-03-0522																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	696	18.9																	696	18.9
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- 590	590	7.4																	590	7.4
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	590	7.4																	590	7.4
Total Procurement Cost		26.3																		26.3

METHOD OF IMPLEMENTATION Contr Field Team Applica ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 3 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Transmission Electronic Controller (TEC) 1-94-03-0522 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	696																					696
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	590																					590
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Balance of kits (106) will be used for spares. No quantities associated with TEC contractor support in FY 97.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Fire Suppression Change 1-94-03-0525

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

The purpose of this modification is to comply with Department of Defense Directive (DoDD) 6050.9 for the elimination of Chloroflurocarbons (CFC) and Halons. The objective of this modification is to identify and eliminate all Ozone Depleting Chemicals (ODC) and all Ozone Depleting Substances (ODS) by Fiscal Year 2000. The initial phase of this program directs modification of mounting brackets to allow CO2 bottles to be used in lieu of the current 2.75 pound Halon bottles. Swap-out for the hand-held bottles is being done by the U.S. Army Tank and Automotive Command (TACOM) and began 1Q95. The second phase will direct the modification and/or conversion of the 7 pound engine compartment Halon bottle to an alternative substance.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
Will be incorporated into production.	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Fire Suppression Change 1-94-03-0525

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment			857	0.7															857	0.7
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- 857			158	0.1	430	0.1	269	0.1											857	0.3
FY 1998 Eqpt -- 430																				
FY 1999 Eqpt -- 427																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			158	0.1	430	0.1	269	0.1											857	0.3
Total Procurement Cost				0.8		0.1		0.1												1.0

METHOD OF IMPLEMENTATION Depot Field Application — ADMINISTRATIVE LEADTIME: 4 Months — PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1997:	31 Jan 97	FY 1998:	31 Dec 97	FY 1999:	31 Dec 98
Delivery Date:	FY 1997:	31 Jan 98	FY 1998:	31 Dec 98	FY 1999:	31 Dec 99

Installation Schedule: Fire Suppression Change 1-94-03-0525 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997			100	300	457																	857
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997			27	200	200	150	150	130														857
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Interim IPDS Launcher 1-94-03-0528

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions (MFOM) and incorporate a new requirement to fire the Block IA, Army TACMS Missile System. The Block IA missile will be fielded in 1QFY98 and will require global positioning system (GPS) interface at time of launch. This modification must be accelerated because the pre-planned product improvement for GPS was not planned until the fielding of the Position Navigational Unit [POSNAV Unit (PNU)] with the Improved Fire Control System (IFCS) in FY00. The modification will incorporate the IPDS Line Replaceable Unit (LRU), a GPS antenna, associated cabling with armor protection, hoist bumper pads, a modification to the existing M68 Missile/Launch Pod Assembly (M/LPA) trainer, and sufficient Random Access Memory (RAM), with the Non Volatile Memory Module (NVMM) to support the software loaded into the IEU.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
Will be integrated into launchers as an interim program in support of ATACMS Block 1A.	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Interim IPDS Launcher 1-94-03-0528																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	29	16.2																	29	16.2
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment				1.7																1.7
Other																				
Interim Contractor Support				0.5		0.5		0.5		0.6		0.6		0.7		0.7				4.1
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost		16.2		2.2		0.5		0.5		0.6		0.6		0.7		0.7				22.0

METHOD OF IMPLEMENTATION Contract Field Integration ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Interim MS Launcher 1-94-03-0529

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

A special interim launcher configuration is required to allow the current M270 platform to fire all of its existing fielded M270 Family of Munitions (MFOM) and incorporate a new requirement to fire the Extended Range (ER) - MLRS beginning in 1QFY99. This modification is required to measure low altitude winds at the time of launch and will thus improve accuracy with increased range. This modification must be accelerated because the pre-planned product improvement for GPS was not planned for until the fielding of the Meteorological Sensor (MS) with the Improved Fire Control System (IFCS) in FY00. The components for this modification are the two IFCS MS Line Replaceable Units (LRUs), i.e., MET Sensor-Electronics Unit (MS-EU) and MS-Tranceiving Unit (MS-TU), associated kit components and sufficient Random Access Memory (RAM) to support the software loaded into the IEU. The current IEU P/N 13210269 will be modified to IEU P/N 13210255, with the Non Volatile Memory Module (NVMM).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
Will be integrated into launchers as an interim program in support of ER-MLRS.	

INDIVIDUAL MODIFICATION																		Date	February 1997	
MODIFICATION TITLE (Cont):	Interim MS Launcher 1-94-03-0529																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	10	9.9																	10	9.9
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment*																				
Other																				
Interim Contractor Support				0.1		0.1		0.1		0.1		0.1		0.1		0.1				0.7
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost		9.9		0.1		0.1		0.1		0.1		0.1		0.1		0.1				10.6

* Support equipment for interim launcher pool upgrade.

METHOD OF IMPLEMENTATION Contract Field Integration ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 14 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Hoist Carriage Assembly 1-95-03-0530

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

This modification provides a more reliable and stronger hoist carriage assembly, which will prevent cracks to the assembly and unnecessary bending of the "spider" beam. The modification will incorporate two Class I ECPs into 376 US Army M270 launchers and will standardize the fleet with one hoist carriage assembly common to the -202/-203 configuration M270 launcher. This modification will reduce Direct Support maintenance manhours and improve overall operational readiness.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
	Development complete - Incorporated into current production.

INDIVIDUAL MODIFICATION																		Date	February 1997	
MODIFICATION TITLE (Cont):	Hoist Carriage Assembly 1-95-03-0530																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	376	3.3																	376	3.3
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 376*	143	0.5	233	0.9															376	1.4
FY 1997 Eqpt - Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	143	0.5	233	0.9															376	1.4
Total Procurement Cost		3.8		0.9																4.7

METHOD OF IMPLEMENTATION Depot Field Application ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 4 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Hoist Carriage Assembly 1-95-03-0530 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	65	75	105	93	38																	376
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	12	53	99	125	87																	376
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Obsolescence Mitigation/ECP Reliability Integration 1-95-03-Obsc

MODELS OF SYSTEMS AFFECTED: MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)

DESCRIPTION / JUSTIFICATION:

Technology obsolescence is dictating the replacement of many launcher components. A study performed showed by the year 2003 over 70% of the electronic components will be obsolete and will not be replaceable. Circuit Cards in the line replaceable units (LRUs) e.g., IEU and FCU, are already obsolete or rapidly approaching obsolescence. The funding on this program will procure modification kits which will incorporate improved components necessary to replace parts no longer available. Program Office support costs are included within this modification line. In addition, this modification will reestablish the MLRS baseline at the optimal configuration for integration of IFCS and ILMS (MC No. 0519 and 0526) by aiding in the calibration of the system, providing required accuracy levels for new and future munitions, increasing reliability of early configuration of the launcher which reduces O&S costs, and eliminating noise and multiple software requirements. Also, funding in FY 00 and FY 01 will be programmed for Army Technical Architecture Migration Phase I for communications software changes to meet the VCSA ATA Implementation

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

PLANNED	ACCOMPLISHED
Will incorporate ongoing obsolescence analysis and determination into production.	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Obsolescence Mitigation/ECP Reliability Integration 1-95-03-Obsc

FINANCIAL PLAN: ($ in Millions)

	FY 1996 and Prior		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		2.2		1.4		1.0		1.0		0.8		1.1		1.1		1.0				9.6
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment*										0.2		0.2								0.4
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost		2.2		1.4		1.0		1.0		1.0		1.3		1.1		1.0				10.0

* Support equipment funds show breakout of Phase I ATA requirement.

METHOD OF IMPLEMENTATION — ADMINISTRATIVE LEADTIME: Months — PRODUCTION LEADTIME: Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Spares and Repair Parts

P-1 ITEM NOMENCLATURE: SPARES AND REPAIR PARTS (CA0250)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	11.5	12.1	11.3	21.4	22.0	31.6	38.8	43.6

Description: Provides for procurement of spares to support initial fielding of new or modified end items.

Justification: The funds in this account procure depot level reparable (DLRs) secondary items from the Supply Management, Army business area of the Defense Business Operations Fund. To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:

System	FY 1996	FY 1997	FY 1998	FY 1999
Javelin				4.2
MLRS	5.1		1.0	7.1
ATACMS		1.0	1.0	
Patriot Mods	3.4	7.0	2.7	3.6
Avenger Mods	1.0			
ITAS/TOW		2.3	5.7	5.8
MLRS Mods	2.0	1.8	1.0	.6
Totals	11.5	12.1	11.4	21.3

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Support Equipment and Facilities				P-1 ITEM NOMENCLATURE AIR DEFENSE TARGETS (C93000)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	6.6	6.2	1.0	1.0	1.0	1.0	1.0	1.0

DESCRIPTION:
The Air Defense Targets Program provides fixed wing, rotary wing, ballistic and towed targets; target control systems; and ancillary equipment for worldwide active Army and Reserve Component air defense training, including quality assurance, lot acceptance, production qualification, and first article tests.

During the budget years, targets to be procured include many different varieties, ranging from 1/9-scale training targets to realistic, full scale threats, as well as the Ballistic Aerial Target System (BATS). Towed targets to be procured include the Infrared (IR) Training Target. Target ancillary hardware includes items such as the target group set, scoring hardware and installation kits, scoring ground support equipment, IR augmenters, radar altimeters, and low altitude kit.

JUSTIFICATION:
In support of soldier training, targets are provided to support fielded AVENGER, MANPADS, AIR-TO-AIR STINGER, PATRIOT, Bradley STINGER Fighting Vehicle (BSFV) and LINEBACKER. Major items of target hardware which support or will support soldier training include MQM-107, Radio Controlled Miniature Aerial Target (RCMAT), Ballistic Aerial Target System (BATS), 1/5 Scale Remotely Piloted Vehicle Targets (RPVTS), towed training targets, target control systems and ancillary equipment. Training requirements are generated by DA major field commands and provided to TMO at an annual DA-sponsored targets conference. These field requirements have been scrubbed against HQDA fielding and force restructuring plans, and are consistent with approved training doctrine.

In support of weapon systems testing, targets are provided on a reimbursable basis to STINGER, PATRIOT, U.S. Navy, U.S. Air Force, and other Army programs. Major items of target hardware which support or will support these tests include ancillary items, MQM-107, 1/5 Scale RPVTS, target control systems, drone control kits and BATS. To provide for sustained operations of target systems, it is necessary to establish operational pools which vary in size depending on quantity and frequency of flights which must be supported.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities			B. WEAPON AIR DEFENSE TARGETS (C93000)			C. MANUFACTURER NAME			D. DATE February 1997		
Missiles	ID	**FY96**			**FY97**			**FY98**			**FY99**		
Cost Elements	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
MQM-107													
-Airframe/Engine													
-Technical Publications													
-Engineering Costs		1853			1912			665			664		
-Other Costs		780			727			333			332		
SUBTOTAL		**2633**			**2639**			**998**			**996**		
RCMAT													
-Hardware													
-Operating Costs		52			50								
-Other Costs		22			19								
SUBTOTAL		**74**			**69**								
1/5 SCALE													
-Hardware		176	112	2	618	150	4						
-Operating Costs		60			120								
-Other Costs		99			280								
SUBTOTAL		**335**			**1018**								
BATS													
-Airframes		874	157	VAR									
-Rocket Motors					425	7000	VAR						
-Other Hardware													
-Operating Costs		109			55								
-Other Costs		414			183								
SUBTOTAL		**1397**			**663**								
TOWED TARGETS													
-Operating Costs		77			54								
-Other Costs		32			21								
SUBTOTAL		**109**			**75**								
ANCILLARY/AUGMENTATION													
-Hardware													
- Piece Parts CIK-170 Scoring Kits													
- GSQ-102 Scoring Ground Stations													
- RCMAT CIK-206 Scoring Kits													
- Universal Fins w/CDOPS													
- CIK-228 Scoring Kits													
- RCMAT CIK-206 Scoring Kits		909	500	2	881	470	2						
-Operating Costs		532			375								
-Other Costs		606			475								
SUBTOTAL		**2047**			**1731**								
GRAND TOTAL		**6595**			**6195**			**998**			**996**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT / 5 / Support Equipment and Facilities

C. P-1 ITEM NOMENCLATURE: AIR DEFENSE TARGETS (C93000)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
1/5 SCALE										
FY96	Continental RPV, Barstow, CA	FP	MICOM	Oct-95	Jun-96	112	4	Yes		
FY97	Continental RPV, Barstow, CA	FP	MICOM	Oct-96	Feb-97	150	4	Yes		
BATS										
FY96										
- Airframes	Lockley Mfg., New Castle, PA	FP	MICOM	Jan-96	Jan-97	157	VAR	Yes		
- Other Hardware										
FY97										
- Rocket Motors	Lockley Mfg., New Castle, PA.	FP	MICOM	Oct-96	Jan-97	7000	VAR	Yes		
ANCILLARY/AUGMENTATION										
FY96										
- RCMAT CIK-206 Scoring Kits	Cartwright Eng., Fullerton, CA	FP	MICOM	Oct-95	May-96	500	2	Yes		
FY97										
- RCMAT CIK-206 Scoring Kits	Cartwright Eng., Fullerton, CA	FP	MICOM	Oct-96	May-97	470	2	Yes		

REMARKS:

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: AIR DEFENSE TARGETS (C93000)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 95 / Calendar Year 95												Fiscal Year 96 / Calendar Year 96										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1/5 SCALE																														
	1	96	A	112																							22	30	30	30	
	4	97	A	150																											150
BATS																														
- Airframes	2	96	A	157																											157
- Rocket Motors	5	97	A	7000																											7000
ANCILLARY/AUGMENTATION																														
- RCMAT CIK-206 Scoring Kits	3	96	A	500																						20	20	20	55	55	330
- RCMAT CIK-206 Scoring Kits	3	97	A	470																											470
TOTAL				**8389**																						**20**	**42**	**50**	**85**	**85**	**8107**

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Continental RPV, Barstow, CA	3	7	30	3
2	Lockley Mfg., New Castle, PA	100	300	500	5
3	Cartwright Engineering, Fullerton, CA	100	150	200	3
4	To Be Determined	3	7	30	3
5	Rock Island Arsenal	500	800	1000	3

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	1	1	1	2
1	REORDER	1	1	1	2
2	INITIAL	9	5	11	16
2	REORDER	9	5	11	16
3	INITIAL	3	2	3	5
3	REORDER	3	2	3	5
4	INITIAL	1	1	1	2
4	REORDER	1	1	1	2
5	INITIAL	4	6	12	18
5	REORDER	4	6	12	18

REMARKS

FY 97 / 98 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: AIR DEFENSE TARGETS (C93000)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 97 OCT	FY 97 NOV	FY 97 DEC	CY 97 JAN	CY 97 FEB	CY 97 MAR	CY 97 APR	CY 97 MAY	CY 97 JUN	CY 97 JUL	CY 97 AUG	CY 97 SEP	FY 98 OCT	FY 98 NOV	FY 98 DEC	CY 98 JAN	CY 98 FEB	CY 98 MAR	CY 98 APR	CY 98 MAY	CY 98 JUN	CY 98 JUL	CY 98 AUG	CY 98 SEP	LATER
1/5 SCALE																														
	1	96	A	112	112																									
	4	97	A	150							20	20	20	20	20	20	20	10												
BATS																														
- Airframes	2	96	A	157											20	137														
- Rocket Motors	5	97	A	7000						600	800	800	800	800	800	800	800	800												
ANCILLARY/AUGMENTATION																														
- RCMAT CIK-206 Scoring Kits	3	96	A	500	170	330	55	75	75	75	50																			
- RCMAT CIK-206 Scoring Kits	3	97	A	470										20	20	20	55	55	75	75	75	75								
TOTAL				**8389**	**282**	**330**	**55**	**75**	**75**	**675**	**870**	**820**	**820**	**840**	**860**	**977**	**875**	**865**	**75**	**75**	**75**	**75**								

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Continental RPV, Barstow, CA	3	7	30	3
2	Lockley Mfg., New Castle, PA	100	300	500	5
3	Cartwright Engineering, Fullerton, CA	100	150	200	3
4	To Be Determined	3	7	30	3
5	Rock Island Arsenal	500	800	1000	3

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	1	1	1	2
1	REORDER	1	1	1	2
2	INITIAL	9	5	11	16
2	REORDER	9	5	11	16
3	INITIAL	3	2	3	5
3	REORDER	3	2	3	5
4	INITIAL	1	1	1	2
4	REORDER	1	1	1	2
5	INITIAL	4	6	12	18
5	REORDER	4	6	12	18

REMARKS

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Support Equipment and Facilities

P-1 ITEM NOMENCLATURE: ITEMS LESS THAN $2.0M (MISSILES) (CL2000)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.1

DESCRIPTION: Provides for procurement of various tools and shop sets to support the Army's missile systems worldwide.

JUSTIFICATION: Funding is required for procurement of tool and shop sets to support the following systems:

MLRS
TOW
AVENGER

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities			B. WEAPON ITEMS LESS THAN $2.0M (MISSILES) (CL2000)			C. MANUFACTURER NAME ANNISTON DEPOT WAREHOUSE 30			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
ALL ARE MISSILE TOOL KITS. NO MODS													
1. MLRS	A												
COMPONENTS		402			487			467			469		
ASSEMBLY		215			260			250			251		
2. TOW	A												
COMPONENTS		65			16			16			14		
ASSEMBLY		35			8			8			6		
3. AVENGER	A												
COMPONENTS		165			142			140			132		
ASSEMBLY		89			78			73			69		
TOTAL		**971**			**991**			**954**			**941**		
NOTE: EACH SYSTEM HAS MORE THAN ONE KIT WITH VARYING QUANTITIES AND UNIT COSTS FOR EACH KIT.													

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Support Equipment and Facilities

P-1 ITEM NOMENCLATURE: MISSILE DEMILITARIZATION (HL2000)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Description: The Missile Demilitarization Program provides for the demilitarization of U.S. Army missiles and missile components that are obsolete or excess to the Army requirements following the guidelines of the Resource Conservation and Recovery Act.

Justification: The backlog of missiles requiring demilitarization is a growing concern of the Department of the Army. Changes during the past few years in the worldwide political environment have resulted in drastic changes in military strategies. Reduced requirements of prepositioned military forces, retrograde of weapon system assets from Europe and major changes in war reserve planning have placed a tremendous strain on the CONUS wholesale storage base. There are some 52,000 missiles and 100,000 missile components utilizing 99 premium storage igloos that require demilitarization. FY98 will continue the process of demilitarization priority one (obsolete, excess, environmental concern and using valuable storage space) missiles, i.e., Shillelagh.

Missiles Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO MISSILE PROCUREMENT / 5 / Support Equipment and Facilities			B. WEAPON MISSILE DEMILITARIZATION (HL2000)			C. MANUFACTURER NAME N/A			D. DATE February 1997		
Missiles Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
SHILLELAGH													
DEMILITARIZATION		1116			1149			1183			1219		
OTHER		255			252			249			194		
REDEYE													
DEMILITARIZATION		125											
OTHER		20											
SS-11(M22)													
DEMILITARIZATION		102			107								
OTHER		25			24								
NIKE HERCULES								60			69		
DEMILITARIZATION								15			14		
OTHER													
TOTAL		**1643**			**1532**			**1507**			**1496**		

BUDGET ITEM JUSTIFICATION SHEET				DATE February 1997				
APPROPRIATION / BUDGET ACTIVITY MISSILE PROCUREMENT /Support Equipment and Facilities				P-1 ITEM NOMENCLATURE PRODUCTION BASE SUPPORT (CA0100)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	0	0	0
COST (in millions)	2.8	3.5	3.4	3.3	3.6	3.6	3.9	3.9

DESCRIPTION: This program provides for Production Support and Equipment Replacement (PSR) of Government owned equipment used in production and production testing of missile systems or missile components. Funds are used to establish, modernize, expand or replace Army-owned industrial facilities.

JUSTIFICATION: The FY98/FY99 request includes the above routine maintenance on real property, replacement/rehabilitation of existing equipment or instrumentation and modernization of test facilities at the Redstone Arsenal Technical Test Center and White Sands Missile Range. This project is also essential in sustaining the Army's missile warhead production capability, eliminating safety hazards, etc., at the Iowa Army AMMO Plant.

A detailed summary project listing is attached.

Production Support and Facilities Projects

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Support Equipment and Facilities

P-1 ITEM NOMENCLATURE: PRODUCTION BASE SUPPORT (CA0100)

PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
39X2169	PSR	Redstone Arsenal Rocket Engine (RARE) Facility	1.316	1.947	1.814	1.775
Thiokol Corp, producers of Solid Rocket Motors, closed its Redstone facility in September 1996. Due to the Thiokol's mission, an Environmental Baseline Study (EBS) has been performed to assess and establish liability for contamination. Funds will be used to complete environmental studies, demolition/asbestos abatement or other documentation related to closure of RARE that is required by environmental laws or that which is in the best interest of the government.						
93X5069	PSR	White Sands Missile Range	0.800	1.095	1.000	1.000
Funds replacement and initial purchase of equipment and instrumentation used in production testing of missile systems and components. Supported systems include ATACMS, MLRS, PATRIOT, SADARM. This project will procure computer system upgrades, replace test equipment and provide communications security equipment.						
93X5071	PSR	Redstone Arsenal Technical Test Center (RTTC)	0.200	0.224	0.250	0.250
This equipment is required for modernization of test facilities and equipment in the Dynamic, Static, and Electronic Component Test Branches of the Redstone Technical Test Center.						

Production Support and Facilities Projects

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: MISSILE PROCUREMENT /Support Equipment and Facilities

P-1 ITEM NOMENCLATURE: PRODUCTION BASE SUPPORT (CA0100)

PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
3902335		MISSILE AUTOMATIC TEST EQUIPMENT (MATE)	0.383			
Annual project to maintain and upgrade Missile Automatic Test Equipment used in depot level maintenance of various missile systems.						
6935333		PSR, IOWA ARMY AMMO PLANT	0.149	0.200	0.300	0.300
This project is essential to sustain the Army's missile warhead production capability, eliminate safety hazards by replacing worn equipment and rehabilitation of facilities. Further, this project will improve the Heating Ventilation and Air Conditioning (HVAC) in the TOW production area, provide fire protection in Bldg I-40 assembly area and upgrade process controllers in various areas.						